

GAZETTEER OF NAINI TAL.

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ABBREVIATIONS.

J. A. S. B.—Journal of the Bengal Asiatic Society.

J. R. A. S.—Journal of the Royal Asiatic Society.

E. H. I., or Elliot.—The History of India as told
by our own Historians, by Sir H. M. Elliot.

CHAPTER I.

GENERAL FEATURES.

THE district of Naini Tal occupies the southern and south-eastern portion of the Kumaun division. It is of irregular shape, bounded on the north by Almora and a portion of Garhwal, on the east by a portion of the Almora district and Nepal, on the west by the Garhwál and Bijnor districts, and on the south by Pilibhít, Bareilly, the Rampur State and Moradabad. The Almora parganas adjoining it on the north are Pali Pachhaon, Phaldakot, Baramandal and Chaugarkha; and on the east Kali Kumaun and the Bhabar Tallades. The boundary is for some distance on the north formed by the Kosi river, and the patts of Kosyan Malla and Chauthan, as well as a portion of Kosyan Talla beyond that river on the Almora side; but to the north-east and east the boundary is for the most part purely artificial and merely corresponds with that of the old fiscal subdivisions. For some distance, however, the boundary is formed by the Kumnia, which flows into the Sual, an affluent of the Kosi, at the Gurari bridge on the Almora road, and the Pharka, which also flows under Mukhtesar and extends to the oak ridges of Chaubhainsi. The Nepal boundary is the Sarda river, which touches this district in the south-east along the Bilheri pargana of the Tarai. To the south the boundary is again an artificial one; the district marches with the Puranpur, Pilibhít and Jahanabad parganas of Pilibhít; with Richha and Chaumahla of Bareilly; with the Bilaspur and Suar tahsils of the Rampur State, and with Thakurdwara of Moradabad. On the west the Bijnor boundary is for the most part formed by the Phika river, beyond which lies the Afzalgarh pargana; and on the north-west is the Talla Salan pargana of the Garhwál district. The total area of the district is 1,701,093 acres or 2,658 square miles. It lies between the parallels of $28^{\circ}51'$ and $29^{\circ}37'$ of north latitude, and between $78^{\circ}43'$ and $80^{\circ}0'$ east longitude

The district is of a most heterogeneous description. The northern portion consists of hills, the outer ranges of the Himálayas, which in many places rise up steep from the gentle slopes at their feet, while elsewhere there are several series of low forest-clad hills which form as it were the outworks of the main range of mountains. From the hills we pass with rapid transitions through the curious phenomena of the Tarai and Bhabar to the ordinary alluvial plain that characterises the north of Hindostan.

The mountains of the outer Himálayas in this district have a general elevation of about 6,500 feet above the level of the sea, while the highest summits attain to a height of over 8,000 feet. They have this peculiarity, that the outermost range is of considerably greater elevation than the intermediate chains lying between it and the outlying spurs of the great snow-clad peaks of Almora and Garhwál.

The chief mountain range of the district is the Gagar, which forms the southern brow of the Himálayan system. It lies to the south of the Kosi river and extends eastwards from Mohan above Ramnagar, with an average breadth of eight or ten miles. Commencing on the east there is on the eastern boundary of patti Kosyan Talla the Saonchaliya peak attaining an elevation of 8,504 feet; to the south-east lies Badhán-dhura, 8,408 feet; further east a peak, Bhurapátal, rises to 8,244 feet, and east of this again is Badhán-tola, with a height of 8,612 feet. The main ridge, still running slightly south-east, takes a sudden bend south by Binaik-dhura, the summit of which attains an elevation of 8,186 feet. Here the chain is broken by a deep valley along which runs the road from Dechauri to Ratighat following the course of the Baur southwards from the village of Pangot and the tributary of the Kosi known as the Dhaur from Pangot northwards. Beyond this valley on the east the range rises up again precipitously to China, above Naini Tal, with an elevation of 8,568 feet, and the other peaks which surround the lake and continues in a south-easterly direction to Liriya-kanta, and thence eastwards to the Ninglat or Gagar ridge above Ramgarh. The Gagar range is also known as Gargachal from the legend that the Rishi, Garga once resided near the Gagar fort. To

the south of the main chain there are numerous shoulders and spurs, the chief of which lie to the south of Naini Tal and form the breastwork of the Himálayas overlooking the Bhabar.

East of Ramgarh the Gagar range merges in that known as Lohukot, uniting at the Mukhtesar peak, which rises to a height of 7,602 feet. This range runs westwards from Nathua Khan towards Khairna, the highest elevation being Pathargarhi with a height of 7,535 feet. A spur extends northwards from Mukhtesar to Peora, which stands on its northern face and is known as the Laldana Binaik. South from Mukhtesar runs the great ridge which forms the water-parting of the valleys of the Gola and Ladhiya rivers. It is very clearly defined throughout, but there is no peak with an elevation of over 7,500 feet. It runs along the boundaries of Bisjyula, Chaubhainsi and Chaugarh, and for several miles separates this district from Almora. In the extreme east of Chaugarh it ends in a peak of 6,128 feet and thence passes into Kali Kumaun. Another range of hills trends eastwards from Kathgodam, culminating in the Deoguri peak, and its crest forms the southern boundary of the hill patts. Further east, from above Chergallia, there is a branch of this range running parallel, and to the south of, the main chain, and between them is the valley of the Nandhaur river. Between this chain of hills and that which forms the eastern boundary is the valley of the Gola, flanked on either side by lofty mountains. Those to the south form a regular chain running east and west, connected at the western end with the southern scarp of the Himálaya and terminating to the east towards the Nandhaur. The northern hills are irregular in outline. They surround the lakes of Sat Tal, Bhim Tal, Naukuchhiya Tal and Malwa Tal, and thence trend northwards to join the Mukhtesar range near Dhari above the headwaters of the Gola, and culminate in the peak above Chyurigarh near Malwa Tal with an elevation of 7,957 feet. The southernmost peak of this range is the conical hill of Kailas in Chhabbis Dumola, which has been mentioned in a separate article.

Below the main outworks of the Himálaya there frequently occurs a lower line of hills known as the Siwalik or sub-Himálayan chain. These Siwaliks are most marked in the Dehra

Dún and Saháranpur districts, and here only occur to a very modified extent. They can be seen alone at the foot of the Kotah Bhabar, but even here they present no great barrier between the plains and the uplands, and further east they are so blended with the outer range of the Himálaya that a geologist alone can trace their sequence. In the Kotah Bhabar these small hills rise abruptly from the apparently level surface of the flat country below to a height of a few hundred feet only; they are composed of sandstone and conglomerates, and the dip of the strata is usually towards the general mass of the mountains at a low angle. To the north a long gentle declivity slopes inwards, forming a longitudinal shallow valley by meeting the foot of the next line of hills. This valley is known as the Kotah Dún. It is cut through by the passage of several streams and closed at either end by the near approach to each other of the two ranges that flank it. The surface of the Dún is tolerably level, but broken up into steps or plateaux at different heights. A large portion of the area is under forest; but round the villages, and especially below Kotah and Dechauri, there are wide stretches of very fine cultivation, amply irrigated by the numerous canals.

Immediately below the foot of the hills there lies a narrow belt of country, usually covered with forest and remarkable for an entire absence of water—a phenomenon eminently characteristic of this tract. This belt of waterless forest land is called the Bhabar* and has a breadth of from five to fifteen miles; it lies between $28^{\circ} 56' 46''$ and $29^{\circ} 35' 22''$ north latitude, and between $78^{\circ} 57' 40''$ and $80^{\circ} 1' 8''$ east longitude. In the east the Dhyánirau Bhabar is comparatively narrow, and it is not till we come to the Chhakhata Bhabar in the centre of the district that we get a breadth of eight to twelve miles, or rather more in places, that lasts as far eastwards as the Phika. Though no stream or springs exist, the Bhabar is clothed with stretches of forest, finding its nourishment in the few feet of alluvial matter that rests on the boulder and shingle deposit below, and with canal-fed cultivation. The Bhabar includes the four pattis known as Cha-bhainsi Chhakhata, Kotah and

* The word is said to mean porous

Chilkia, each of which has been separately described. Formerly Tanakpur or the Tallades Bhabar also belonged to this district; but it was transferred in 1896 to Almora for administrative reasons, and the present eastern boundary is the Kamin river. In the Bhabar no water rises from the ground. Throughout its whole extent not a single spring nor any water can be seen, except occasionally where one of the larger rivers takes its course. In the rains alone torrents cut into the ground, and the channels thus formed exhibit characteristic sections of this remarkable tract. It may then be seen that there is but a thin covering of alluvial soil on a vast dry bed of boulders and shingle through which all rain that falls sinks rapidly, and which absorbs in the same way all the minor streams of the outer ranges. Instead of reeds and grasses, gigantic haldus and khairs rear their heads above a tangled undergrowth of creepers and thorns which present a barrier to progress that an elephant alone can surmount. Towards the hills we find the sal tree, and in Kotah great groves of mangoes, while large tracts of cultivation appear wherever irrigation is available. For this purpose the streams of the lower hills are turned into artificial channels before they reach the shingle deposit, and even the lakes are dammed up to retain a sufficient supply of water for the Bhabar. West of the Sawaldeo sot, however, there is little irrigation or cultivation, and the Bhabar there remains almost untouched by the plough. The actual slope of the ground between the Tarai and the foot of the hills is considerable, though not apparent to the traveller, except when he observes the rapidity of the current in the irrigation channels that line the roads by which the Bhabar is crossed.

To the south of the Bhabar lies the Tarai, which extends southwards to the cultivated plains of Rohilkhand. It stretches from the Sarda on the east to the Kashipur pargana on the west, and lies between $28^{\circ} 43'$ and $29^{\circ} 26'$ north latitude, and between $78^{\circ} 53'$ and 80° east longitude, with an average breadth of eleven miles from north to south. Its general appearance is that of a plain sloping gently towards the south-east, the average fall being twelve feet in the mile. The country in general is a tract of forest and swamps, with scattered patches of cultivation,

which are larger and closer in the south. The northern half chiefly consists of jungle or savannahs of grass and reeds: the country is still chiefly suitable for grazing only, although of late years there has been a marked extension of cultivation from the south to the line of springs in the north. These springs rise in a series of morasses that are formed along the southern edge of the Bhabar by syphonic influence on the subterranean drainage, and are strongest and most numerous where the breadth of the Bhabar above them is greatest. Thus they are particularly strong to the west of the Kosi, where there is a large extent of boulder formation to the north; but further east, between the Dabka and Baur, where the Siwaliks of the Kotah Dun extend far to the south and the Bhabar is very narrow, the springs are but feeble. In the extreme east again, beyond the Nandhaur, the depth of the boulder formation is very small, and the spring-level of that part of the Bhabar is not more than eight or ten feet below the surface, so that the rainfall and drainage water flow off rapidly, instead of being absorbed; consequently there are no large spring-fed streams, as to the west of the Nandhaur, for the sources of supply are in this case wanting. From this line of springs flow sluggish streams, which carry off only a portion of the superfluous moisture; they are constantly doubling back their course and the channel is seldom well defined. The land between is slightly undulating, rising as it leaves one channel and falling as it approaches the next. The undulations to the north are small and decided, while to the south, as the distance between the rivers increases, the country is more level. The soil of the Tarai is everywhere a moist alluvial deposit, without any sign of the rock formations of the Bhabar.

Lastly, there is the level country in the south-west corner which comprises the subdivison of Kashipur. This calls for no detailed description; it resembles the plains of Rohilkhand, save that it is less highly cultivated and contains more open grass jungle than the southern districts. There is no clearly-defined physical boundary between the plains of Kashipur and the Tarai; the northern portion of the pargana, indeed, resembles the Tarai in every respect, but the change occurs gradually as the soil loses its marshy character and a different vegetation

springs up. Further south there are large open tracts slightly undulating and scored with watercourses ; the whole of it would be capable of cultivation were the cultivators forthcoming, although, as it is, it forms a valuable grazing-ground. The climate is far less unhealthy than that of the Tarai, but is decidedly more malarious than the ordinary district of the plains.

None of the rivers in this district have their origin in the snowy heights of the upper Himálaya. To the east there is the Sarda, indeed, but this merely touches the eastern boundary of pargana Bilheri in the Tarai, while the Ramganga lies well in the Bijnor district to the west. The Kosi alone rises to the north of the district in the hill country of Almora, and all the others spring from the lower ranges of hills both in Naini Tal and Garhwál.

The main drainage lines of the hill country of this district are the water-sheds of the Kosi, Gola and Nandhaur rivers. There are one or two others of less importance, such as their affluents and the Ladhiya which drains the north-eastern corner, while numberless other rivers and torrents originate in the outer slope. The latter, however, will be dealt with separately in describing the rivers of the Bhabar.

The Ladhiya waters some small but excellent irrigated plots or *seras* in the patti of Malli Rau, but its total length within the district from Joshiura, where it first becomes useful, to Khairagaon, where it passes into the Kali Kumaun pargana of Almora and leaves the district of Naini Tal, is only six miles.

The Kosi rises in patti Borarau Palla of the Almora district and flows in a southerly direction to Someswar, and thence south-east to Almora, near which place it is joined by the Nana Kosi and the Sual. From its junction with the latter it forms for some distance the boundary between the districts of Almora and Naini, running in a westerly direction as far as Khairna, and receiving on its right bank the Ulabaghar and Kuchgarh streams, which flow from pargana Phaldakot, and on its left the Ramgarh *gadhera*, which rises in the Gagar range. From Khairna it ceases to be the boundary flowing through the northern

portion of pargana Dhanīyakot, past Katigaat, where it is fed by the Dhaura, which rises on the western slopes of China, but after a course of some miles it again separates the two districts, dividing Kosyan Talla from Talla Salt. In this portion of its course it takes a north-westerly direction as far as Mohan, where it turns abruptly to the south-east and subsequently south by Dhikuli to Ramnagar, where it debouches from the hills at an elevation of 1,204 feet above the sea. Its bed is strewn with boulders and the gradient is steep. Between Khumarina and Ramnagar it is fed by numerous torrents with very steep beds down which the drainage in the rains pours with great velocity and which occasionally cause great damage. The bed is broad and full of islands which are covered with *khair* and *shisham* trees. Leaving Ramnagar it flows for about seventy miles through the plains and falls into the Ramganga. The Kosi is a most erratic and treacherous river in its behaviour, being subject to very violent floods which do an immense amount of damage to the cultivation on its banks and to the irrigation works. Large protective works have been constructed from time to time with the object of keeping the river within a defined channel, but their success has never been much more than temporary. The erosive power of the stream is enormous, as the gradient of the bed about Ramnagar is a mean slope of 38 feet to the mile. The Kosi is the only river which has a very great effect on the agriculture of the hill patts of the district. Between Khairna and Ukhaldhunga its bed is wide and the fall gradual, so that much alluvial land of exceptional fertility has been formed either in its bed or on its banks. Until the disastrous floods of 1880 the villages along the Kosi had some of the finest irrigated lowlying lands in the hill portions of either the Naini Tal or Almora districts; but they suffered greatly in that year from diluvion and have not yet fully recovered.

The Gola takes its rise on the southern slopes of the ridge to the south of Dol in Dolphat in Almora and the extreme north of patti Chaubhainsi. It has a course generally south to Khansyun in Bisjyula, whence it turns westwards, forming the boundary of Chaugarh as far as its junction with the stream leading from Malwa Tal. It thence turns south again and afterwards

north by west, taking in on its right bank the overflow of Bhim Tal which comes down by the Barakheri stream, and at Ranibagh receiving the surplus waters of Sat Tal and Naini Tal which are brought down by the Ballia. The river leaves the hills at Kathgodam and flows by Haldwani to the Tarai where it becomes known as the Kichha, and eventually joins the Ramganga on its left bank. Another branch of the same river becomes the Dhaura, which flows southwards through the Bhabar and Tarai to the east of the parent stream. The Gola is largely utilized for irrigation purposes and supplies water to most of the clearings round and near Haldwani in the Chhakhata Bhabar. In times of floods it becomes a violent and dangerous torrent, changing its channel through a wide bed. The upper reaches of the Gola produce a little good alluvial soil, but from Khansyun to the end of its course through the hills it is a waste of rock and pebble which continually increases by erosion from the banks.

The Nandhaur river rises on the southern slopes of the lower hills in patti Chaugarh under a high peak of over 7,000 feet in height. After a short south-easterly course it runs due west and again south, entering the Bhabar by the pass above Chorgallia. It flows south past Chorgallia through the Bhabar and Tarai, and thence into the Pilibhit district, eventually joining the Ramganga in Shahjahanpur. Below Chorgallia it is known as the Deoha, and further south as the Garra. At Chorgallia the Nandhaur feeds a canal which irrigates the whole of the Chorgallia circle.

The Dabka rises on the southern declivity of the Gagar range, south of pattis Uchakot and Dhaniyakot, between the heights of Saonchaliya and Badhan-dhura. In the upper part of its course it forms the boundary between Malla and Talla Kotah, and leaves the hills just above the village of Kotah. Thence it flows in a south-westerly direction to the village of Barnadāng, where it passes from the hills that enclose the Kotah Dun. It receives on its right bank the Kicheri torrent, and continues in the same direction as far as the submontane road but from that village it is known as the Gat'ya for a few miles. From the road it turns southwards and es the name

of Ghughha through the Gaihua circle of Chalkia and the north of Bazpur, but further south it is generally known as the Nihal. It is crossed by the road from Kuladhungi to Moradabad, a short distance within the borders of the Rampur State, and eventually, after a course of about ninety miles, joins the Ramganga in the Moradabad district. The Dabka is not a great river: in the hills it is everywhere fordable, except after heavy and continued rainfall, and then only for a few hours; in the Kotah Dun, however, it is frequently impassable after much rain, and the size and number of the boulders in its bed confirm the popular saying that it is a good servant, but a bad master.

Like the Dabka there are several other rivers which have their source on the Binaik-dhura ridge on the side towards the plains; the chief are the Baur to the west; the Nihal, which rises under Ayarpatha and flows past Kaladhungi; and the Ballia. The steepness of the descent make these rivers nothing but turbulent and destructive water-courses, until they are caught and trained by the irrigation works on the foot of the hills for use in the Bhabar. The only permanent streams of any importance in the Bhabar are the Nandhaur or Deoha, the Gola and the Kosi, each of which has been already noticed. There is besides a host of other streams which may be now briefly mentioned. Nothing can be more confusing than the nomenclature of these streams, some of which possess three or four names in a course of twenty miles; some divide or coalesce with others, and again divide according as they receive a larger or smaller supply of water. One year one of a group carries the main stream and another year another. Thus in the east the Nandhaur divides into two just below the hills, the eastern branch picking up the drainage from the east as far as the Kamin and becoming the Deoha, while the western branch is known as the Kailas. West of this is the Gola, with its eastern branch the Sukhi, which is also fed from the numerous hill streams rising in the Deoguru ridge that overlooks the Bhabar. Next comes the Bhakra, which rises in the southern slopes of Chhakhata and flows past Pipalparao into the Tarai; then the Baur and then the numerous little streams which drain the Kotah Dun then the Dabka and beyond this the Kosi.

West of the Kosi the only river of any importance is the Dhela, which is joined by the Sawaldch and flows through Chilkia and Kashipur; beyond this is the Pathariya, and lastly the Phika, which forms the western boundary of the district. Everyone of these rivers, as well as many of the smaller streams, are utilized for irrigation purposes and their waters drawn out to feed the numerous canals.

In the Tarai there are not only these streams, but a vast number of others which originate in the swamps along the northern border. They are almost all very similar in character and, with the exception of the Sarda on the extreme east, they are all tributaries of the Ramganga, which falls into the Ganges in the Hardoi district. The drainage system of the Tarai as a whole resembles the reticulations of a leaf, the streamlets on the edge of the moist country uniting to form larger channels which again feed the arterial lines of drainage and all eventually join the great midrib stream, the Ramganga. Most of these rivers are subject during the rains to heavy floods; they are nearly all used for irrigation, but none of them are navigable. "These Tarai streams are blocked in their courses with fallen trees and overhanging branches to an extent almost inconceivable to one not acquainted with them, and in high flood the velocity is greatly diminished by their presence. I consider it for this reason of the greatest importance that a narrow belt of trees should be maintained along the course of every stream which should never be allowed to be encroached on by cultivators."* So numerous are these streams and so unimportant, except as sources of irrigation, that it would be useless to attempt to describe them in detail. On the east is the Sarda, which forms the boundary of pargana Bilheri, separating it from Nepal. Continuing from east to west we have amongst others the Saniha, Chauka, Khakra, Lohiya, Jugbura and Kamin in pargana Bilheri; the Deoha and Kailas in Nanakmata; the eastern Bahgul in Kilpuri; the Dhaura, Kichha (the continuation of the Gola), Baror and the western Bahgul in Rudarpur; the Dimri, Bhakra, Nihal and Baur in Gadarpur; the Dabka, Ghuga and Naiya in Bazpur and lastly in the Kashipur pargana

which may be here classed with the Tarai, there are the Kosi, Bahilla, Dhela and Phika, besides numerous smaller streams.

The hill country, and especially pargana Chhakhata, which has been styled the Westmoreland of Kumaun, contains several lakes of great size and beauty. The name Chhakhata itself is said to be derived from the Sanskrit and to signify 'the sixty lakes,' although it would be far from easy to identify the whole number. The chief of these lakes are Naini Tal, Bhim Tal, Malwa Tal, Sat Tal, Naukuchhiya Tal and Khurpa Tal, each of which will be separately described. Besides these there are many other smaller lakes, such as Sakha Tal, a name given to several small sheets of water which usually dry up during the summer months, Saria Tal, near Naini Tal on the Kaladhungi road, Khuriya Tal, and so on. These lakes form one of the most remarkable and beautiful features of the lower Himálaya in Kumaun. The manner in which some of them have been put to practical use for irrigation purposes will be described later.

Viewed geologically, the district presents as great a medley as in almost every other aspect. In the extreme south there is the Tarai, a zone of recently formed Gangetic alluvium, and above this the Bhabar, which consists of still newer deposits; a gently sloping mass of coarse gravels forming at the present day from the *débris* brought down by streams from the hills. Above that the sub-Himálayan zone, from three to eight miles wide, of low forest-covered hills, including the Kotah Dun and the valley of the Nandhaur near Aonla Khara, displays a great sequence of fresh-water deposits of the upper tertiary age, comprising chiefly the lower Siwalik Nahan sandstone, but with occasional representatives in the flatter duns of the middle and upper Siwalik sand-rock and conglomerates. All have an apparent dip towards the higher hills and are separated therefrom by the great main-boundary reversed fault.* The higher hills, as far as the Almora boundary, comprise an older set of black or dark slates and fine quartzites forming many of the lower hills and valleys; a massive dark blue-grey limestone or dolomite, capping

* C S Middlemiss: *Physical Geology of the sub-Himálaya of Garhwal and Kumaun*, Geological Survey of India. Vol. XXIV. part 2

many of the ridges and well developed near Naini Tal;* beds of quartzite and basic lava flows, well exposed near Bhim Tal and the neighbouring country;† and possibly other more schistose and granitic rocks in the parts not yet geologically surveyed. No fossils have been found in any of these rocks, but they are probably very ancient. The presence of a series of hill tarns or rock basins in this part of the Himálaya is a surface feature only explicable on the theory of differential earth movements, complicated by faulting, and possibly in some cases by the action of once underground streams. The steep slopes of the limestone-capped slate hills combined with a heavy rainfall near the plainward edge of the hills have from time to time caused landslips of considerable size in the neighbourhood of Naini Tal or a continuous weathering and scattering down the slopes of the greatly disintegrated and shattered slate.‡

The mineral products of the district are various, but of no great value. They may be briefly dealt with under the heads of metals, stone and building materials, and others. Beginning with the second, there is an abundance of good building stone in most parts of the hills. At Naini Tal the stones chiefly used are limestone and clay schists. Limestone is found throughout the hill patts, while sandstone is equally abundant. The most important limestone deposits are those at Chunakhan in the Kotah Bhabar and in the Timlia sot, about six miles east of Ramnagar. Lime is also manufactured at Naini Tal and in Dhyaniarau in the hills. At Gayia both the blue limestone and the tufa lime are obtainable in some quantity, and on the Dabka, Baur and Gola rivers many limestone boulders are found and used for the manufacture of lime. The stone from the quarries at the foot of the hills yields by far the best quality of lime, while that obtained from the tufa deposits is very inferior. The former costs from Rs. 16 to Rs. 17 per

* C. S. Middlemiss, *Physical Geology of Naini Tal*, Rec. Geol. Survey of India, Vol. XXIII, part 4.

† C. S. Middlemiss, *Crystalline and Metamorphic Rocks*, Rec. Geol. Survey of India, Vol. XXIII, part. I.

‡ T. H. Holland's *Report on Geological Structure and Stability of Hill Slopes around Naini Tal*

100 maunds, or from Rs. 20 to Rs. 22 when obtained from Government forests. This lime is mostly non-hydraulic and as a rule is used with one to two parts of washed sand; when mixed with *sarkhi* or pounded brick it becomes slightly hydraulic and can be used for works in streams and for wet foundations. In the Tarai the only local source of lime is a deposit near Chhatarbhoj in the Dalpura forest of a kind of half-formed kankar, which is, however, non-hydraulic. For works on which this cannot be used, lime is obtained from the Bhabar, or occasionally kankar lime is imported from the districts of Bareilly, Moradabad and Pilibhit.

The cost of building materials and masonry work naturally varies with the locality. In the hills, stone is universally employed: in the Bhabar split boulders answer the purpose of bricks; and in the Tarai alone are bricks used to any extent for building purposes. Nine-inch bricks cost from Rs. 680 to Rs. 1,000 per lakh, and first class brick-work in the Tarai costs Rs. 27 per 100 cubic feet, though to this must be added a charge of 12 annas for every mile from the kiln. Rough work in bricks and mortar costs Rs. 20 per 100 cubic feet. Stone is sometimes carted to the Tarai from the foot of the hills for the better kind of work, but owing to the great expense is, as far as possible, dispensed with. Brick or stone houses are not, however, common, and are mainly confined to the towns of Kashipur and Jaspur. Concrete work in Naini Tal costs about Rs. 16 per 100 cubic feet when done in lime and shingle, and Rs. 24 with the addition of pounded brick; on the cart road the cost is Rs. 10 and Rs. 15 respectively; and in the Tarai, when broken bricks are exclusively used, Rs. 16. The cost of excavation varies according to the nature of the soil; in Naini Tal it is sometimes as much as Rs. 500, while in the Tarai it is often as low as Rs. 5 per 100 cubic feet. Rubble in lime mortar ranges from Rs. 14 in Naini Tal to Rs. 12 in the Tarai; but in Portland cement it costs Rs. 50. Dry walling costs from Rs. 5 to Rs. 6-8-0 per 100 cubic feet according to quality. Roofing in the hills is usually done in slates, which are found in the neighbourhood of Naini Tal. In the Tarai brick-work roofs cost Rs. 32 per 100 cubic feet while iron roofs cost Rs. 18 and galvanized

iron and planking Rs. 24 ; the price is somewhat higher in the hills.

The precious metals can hardly be said to occur in this district, at any rate in appreciable quantities ; a small amount of gold is obtained by washing from the sands of the Dhela river, and possibly it occurs in minute quantities elsewhere ; the work is solely carried on by Doms. Copper is found in places, but is no longer worked ; there was formerly a good mine at Kemukhet of pargana Dhyanirau. The only metal deserving mention is iron, the ore of which is found in various parts of the hills, notably at Dechauri, Kaladhungi and the Ramgarh pargana. The workable ore, however, contains a large amount of earthy impurities, and not much more than 50 per cent. of metal. That of Ramgarh is the variety known as scaly iron ore and yields very good iron ; similar to this is the bed at Dhaniyakot on the Kosi. The mining of iron in this district is of great antiquity. In patti Agar there is a caste of Doms known as Agaris, whose special profession was till recently that of miners. There are several mines there that have been worked within late years, chiefly those at Lusgan, Nathyakhan, Gulla and Satbanga. In Ramgarh, too, many mines were worked as late as 1884, but they are now all abandoned. The mining industry was very flourishing at the commencement of British rule, and the Ramgarh mines were leased at a nominal rent to the headman of the Agaris, who till 1826 controlled all the iron mines of Kumaun. It received its first check in 1833, when the miners emigrated from Ramgarh to Khetsari in Pali of Almora, and the business never afterwards recovered its early importance. The existence of iron soon attracted the attention of Government, and in 1856 the Directors sent out a Mr. Sowerby and a large staff of mining assistants to carry on the smelting of iron on account of Government in the interior. The fact was soon established that iron of an excellent quality could be manufactured at rates below the cost of iron imported from England, and a number of private individuals, under the style of Davis & Co., were permitted to undertake operations for the same purpose in other parts of the lower hills.

The avowed object of the Government enterprise was to induce private companies to work by demonstrating the financial and physical possibility of carrying on iron works as a remunerative industry in this province. Messrs. Davis proposed to take over the tract between the Dabka and the Bhakra, and their proposals were accepted with an assurance that they might proceed in confidence to make their arrangements, as Government would grant the lease sought. They therefore took over the Khurpa Tal works in the rains of 1858, and paid their cost price in 1863. This company also erected buildings at Kaladhungi at a cost of Rs. 1,25,000. On the failure of the Government works at Dechauri Colonel Drummond offered to take them over at a valuation. These works were given over to Drummond & Co., who paid the capital under agreement into the treasury in 1861. The forest rules were relaxed in favour of both companies, so as to allow them entire control over the fuel supplies, and eventually, in November 1862, both companies were amalgamated under the title of the North of India Kumaun Iron Works Company (Limited). Soon after the formation of the Company instructions were received from the Secretary of State to construct a tramway to Khurja on the East Indian Railway, chiefly, it would appear, to afford an outlet for the iron manufactures of Kumaun. The tramway was to be laid with cast-iron rails manufactured at Dechauri, and the company lost no time in making several thousand maunds of pig iron. Before the rails were made, however, the Government announced its determination not to undertake this line itself, but to hand its construction over to the Oudh and Rohilkhand Railway. It was essential to the success of the enterprise that some such outlet should exist, and the company accordingly determined to close its works for a time and await the opening of the line.

A license was granted by Government, but unfortunately it was not executed till too late. The agreement contained several conditions binding the company to produce a specified amount of iron each year, to reforest the area cut down for fuel, and among other stipulations to pay a fixed rent and a royalty on every ton of iron produced the capital was to be paid up

before the execution of the deed and the full value of the works at Dechauri, Ramgarh and Khurpa Tal paid in four instalments, the last falling due on the 1st of September 1865. The penalty for failure to comply with these conditions was forfeiture of the property. The purchase-money of Khurpa Tal was alone paid up, but Government suspended the forfeiture clause in 1868. The license was not sent up from Calcutta till June 1864, and in fact was not prepared for signature until after the suspension of the work by the company, and it was then never signed. The capital was expended and the concern was wound up in 1864. A later attempt was made to resuscitate the company, but without success, and the enterprise was abandoned in 1876. Government then took over the works for three years, but also failed, and on the conclusion of the lease reverted to the old idea of pushing the manufacture with private capital; but this, too, was of no effect, as no one was found to take up the work of the company. Undoubtedly these works had not a fair trial—an opinion which was held by Sir Henry Ramsay, who considered that if properly started they would pay their way readily. The fuel difficulty could not have been felt for many years at Dechauri and Kaladhungi, although at Ramgarh the works necessarily failed on account of the distance of the forest and the difficulty of carrying fuel. All the works are now in ruins, and all hope of renewing the industry has been abandoned.

The other minerals are of little importance or interest. Coal ^{is} absent, although indications of lignite appear near Ranibagh and in the Barakheri pass near Bhamauri. Analysis was made of a specimen from Ranibagh; but though the returns were fairly good, the deposits are far too small to be workable.* Similar traces have been found in the bed of the Phika stream. Sulphur occurs in small quantities; there are sulphureous springs at Naini Tal and Kathgodam, while green sulphate of iron is found in the form of iron pyrites in many parts of the hills. Alum or *phitkari* occurs in different parts of Kumaun and abundantly in the aluminous shales near the village of Jakh on the road from Naini Tal to Khairna, and also in the bed of the

* As at c Researches Vol. XVI pp 387 397

Kosi below Almora, where it appears as an incrustation on the rocks. Gypsum is found in pargana Chhakhata, and especially in the bed of the Nihal river on the Kaladhungi road. It has been successfully employed in the manufacture of plaster of Paris.

From time immemorial the forests in Kumaun were considered the property of the ruling power, and as such invariably formed a source of revenue to the State. The most simple mode of realizing this revenue was that of subjecting the products of the forests to a small proprietary due in the shape of duties payable by the exporters. At the commencement of British rule these dues were leased out to the zamindars of the parganas in which the collecting depôts were situated and were styled *kāth-bans*, *kāth-mahals* and *ghikar*, from the principal items assessed in each case; the first signifying timber (*kāth*) or bamboos, the second *kāth* or catechu, and the third the ordinary ghi or clarified butter, the latter being a grazing tax. In 1818 the revenue realized from these dues was Rs. 2,644 for Kumaun, and in 1823 had risen to Rs. 5,733. In 1824 the collections of the dues was entrusted to the authorities of the Moradabad and Bareilly districts in consequence of the difficulties regarding the boundaries that had occurred, but in 1826 the duty of collecting them was restored to the hill districts. In 1828 the forest dues were leased to the farmers of the grazing tax at the same rate, as it was found that the two could not then be usefully separated.

This grazing tax was one of the many miscellaneous items of revenue that descended to the British from former Governments. In the hills this cess was abolished at the first settlement, but in the Bhabar and Tarai it was continued under the name *gai-charai*; the cattle of the hillmen, however, were exempt, the tax being chiefly levied on the cattle of the plains villages that came into the forests during the hot weather. During the two or three years succeeding the conquest the number of cattle proceeding from the hills to the Bhabar and Tarai was not so great as to render any cess on them an object of interest to the Government; but the security afforded by the abolition of the old rural guard (*chaukidari*) system and the introduction of an efficient police led to increased

resort to the plains. It was therefore resolved in 1822 to subject all cattle sent to graze in the Bhabar and Tarai to a uniform tax of three annas for each female buffalo, two annas for each cow, and one anna for each bullock a year. The farm of this tax for the year 1822-23 was given out in three leases, aggregating Rs; 2,077 per annum. The unsettled state of the boundaries between Kumaun and Rohilkhand became a fertile source of dispute between the farmers of this tax for the hill and plains portions of the submontane tract. Many of the hill-men having made their arrangements with the Rohilkhand farmers paid the duties to them and were again called upon to pay by the hill farmers, who claimed the right to levy these dues in all places in which the *chawkidari* cattle dues had formerly been collected. In 1823 the cattle belonging to the kamins, sayánas and thokdárs or headmen of parganas in the hills and to padháns or headmen of villages in the Bhabar and those belonging to permanent residents were exempted from these dues. In 1826 the boundary between the hills and Rohilkhand was finally arranged and separate farms for the grazing dues were established. The principle on which the collections were made was that the farmer within whose jurisdiction the cattle-pens were situate was entitled to collect the tax. The dues were very rarely collected per head, the plan being to count in each *goth* or cattle-pen the *agals* or *donas*, that is the wooden bars to which the cattle were tied at night. The customary rate was to consider each *agul* as containing eight buffaloes and eight cows liable to a tax of two rupees.

To make this point in the history of the management of ^{Bo} the forest more clear, it will be necessary to refer to these ^{dis} boundary disputes. In the earlier years there were no exports of any value from the portion of the lowland tract lying below the chain of custom posts established to levy the export duty, and it was thought that no difficulty could arise in regard to the collections made there, but the unsettled state of the boundary between the Bhabar and Tarai and the conflicting claims of the landholders of the frontier villages both of the hills and of the plains, soon led to unnumberable complaints in which the dist act

authorities on both sides found themselves partizans. The records show a voluminous correspondence on this subject extending over several years. Early in 1819 Mr. Traill reported on the encroachments made by the zamíndárs of Bilheri on the forests lying along the foot of the hills now included in the Tallades Bhabar. This tract was valuable to the hillmen as affording them pasture for their cattle during the winter months, when the grass in the hills dried up and became useless for fodder. During the Gurkha rule a joint commission had been appointed by the Nepal Government and the Nawab of Oudh to settle these disputes, and the Saniha nala was fixed upon as the boundary between the two States. The hillmen had always occupied the jungle to the north of this boundary and were anxious to undertake the cultivation of the portions lying at the foot of the hills which had recently been taken possession of by the Bilheri landholders.* It was agreed that an attempt should be made to settle the disputed boundary on the basis of that which existed in 1801, when Rohilkhand was ceded to the British, and that advantage should be taken of this arrangement to demarcate the whole line of boundary between Rudarpur and the Nepal frontier. The difficulty was much enhanced by the claims set up by Major Hearsey, who in 1814 had purchased the entire taluqa of Bilheri at auction for arrears of revenue and now demanded possession of a portion of the Kumaun Bhabar, on the plea that it belonged to the lowland pargana. A commission was appointed to investigate these matters, and it was at length decided that the Saniha nala had always been, and should continue to be, the boundary between the hills and the low country.† The collection of all dues was handed over to the plains authorities, but in 1826 was again entrusted to the Commissioner of Kumaun.

The first attempt at reservation appears to have been made in 1826, when, on the recommendation of Mr. Traill, a proclamation was issued, prohibiting the cutting of sál on all the

* To Board, February 5th, 1819 and From Board, February 6th, 1819.

† From Board, June 27th 1820 To Board, July 19 h 1820 From Board, August 4th 1820

thaplas or flats immediately adjoining the lower ranges along the whole extent of the Bhabar. These areas, which may be considered the first reserves in Kumaun, were excluded from the leases of forest produce already mentioned. No other steps towards conservancy were, however, undertaken. The denudation of trees of all species appears to have continued steadily and reached its climax between 1855 and 1861, when the demands of the railways for sleepers attracted numerous contractors to these parts, and to them uncontrolled liberty was given to cut where and how they pleased, with the result that large numbers of trees were felled and for want of transport were left lying in the forests. To such an extent was this reckless felling carried on during this period that for several years after the control of the forests was taken in hand by the Commissioner, the energy of the officials was directed towards extracting the timber thus left by the contractors. Fortunately the gravity of the situation was realized by the Commissioner, then Major Ramsay, in 1861, and he took prompt and energetic steps to stop the further denudation of the forests and to place this valuable property on a sounder and more prominent footing. In the following year Major Ramsay was appointed Conservator in addition to his ordinary duties. The farming of leases and indiscriminate felling of trees were stopped, forest officers were appointed, and a system of conservancy was begun under which all trees considered fit for felling were first marked by the officials, and fire conservancy was also taken in hand. The immediate result of these measures was a greatly-increased forest revenue, for whereas in 1831 the total amounted to only Rs. 2,923, and had risen in 1846 to Rs. 12,502 for Kotah and Chhakhata alone, from 1859 to 1868 the average annual surplus was nearly Rs. 70,000.

In 1868 the forests were first placed under the control of the officers of the Forest Department, Major Pearson being the first Conservator; but little change was made in the working arrangements. It was not until the 5th of September 1877 that the forests were gazetted as Government forests, and the reserves of the Kumaun forest division were formally demarcated *

This division, which with the other forests of this district forms part of the Central Circle, originally included the Nainī Tal forests of the present Garhwāl division, and extended from the Sarda on the east to the boundary of the Garhwāl district on the west. The reserves thus constituted were subdivided into twelve blocks, consisting of the most important sāl forests on lower hills and in the Bhabar, exclusive of the Iron Company's grant and some tracts containing good khair and shisham forests. The total area of the blocks which lie in the present Kumaun forest division was, according to the reservation of 1877, in all 674·5 square miles, of which 290·5 square miles were open to the exercise of recorded rights, leaving an unburdened area of 384 square miles of State forests. On the passing of the Indian Forest Act (VII of 1878), it was necessary to reclassify and regazette the existing State forests as "reserved" and "protected" forests. The Conservator, in consultation with the Commissioner and district officers, gave up 38·67 square miles of the original forests, and the remaining area, 638·83 square miles, were gazetted as reserved forests.* At the same time Colonel Garstin demarcated 290·7 square miles of these reserves, as before, for the exercise of rights. These open forests were demarcated by means of round numbered pillars, while the boundaries of the closed reserves were generally defined by means of square pillars. The villages adjoining the forests were given from liberal rights of pasturage, timber and forest produce generally.

The Kumaun Forest Division as at present constituted is divided into eight ranges, each consisting of several blocks. Each range is in the charge of a ranger or deputy ranger, while forest guards exercise supervision over two or more blocks. Three of these ranges, the Dogari, Sarra Nadi and Sarda ranges are situated in the Almora district and call for no further mention in this place. The present area of the division is 510 square miles, of which 277·27 square miles are open to the exercise of recorded rights and 232·73 square miles are free. Of this, 186·5 square miles belong to the Almora district. The forests are situated partly on the outer and lower slopes of the

* Notifica on No 173F dated the 28th February 1879

Himálayas and partly in the Bhabar and Tarai. In this district the hill area is 185·8 square miles, and that in the plains 135·3 square miles. The hill forests consist, first, of those on the lower hills up to an altitude of 3,000 feet, and contain sál trees, with an admixture of sain, haldu, rohani and others; and secondly, those at a greater elevation which contain chár, pines and oaks. The forests on the plains comprise the sál-producing areas, the shisham and khair forests on the old alluvial deposits of the Bhabar and Tarai, and the open savannahs of the eastern portion of the division.

The Kumaun Iron Company had a large grant of forest, extending from the Manar Gadhera, about a mile west of the Dabka, as far as the Bhakra river, about half-way between Kaladhungi and Haldwani. The grant was bounded on the north by the hills, and on the south towards the Bhabar by a line of pillars, and the area was about 350 square miles. It is difficult to say what portion of their rights Government resolved to grant to the company, for the deed was never executed, but it would appear that only fuel rights were intended and no others were expressed in the draft. After the dissolution of the company, part of the grant, amounting to 72·48 square miles of forest and known as the Kotah, Dechauri and Fatehpur blocks, was added to the Kumaun Forest Division.* Of this area, 59·4 square miles were open to the exercise of recorded rights and concessions, and 13·08 square miles became the unburdened property of the State. The rights granted over these forests were revised by the Local Government and the revised list was published in the Gazette.† The Kotah block was then transferred to the Garhwál Division. Of the others, the Dechauri range comprises seven blocks, known as Dechauri and Deigaon, Narni and Kaladhungi, both of which are in the hills, and the plains blocks of Musabangar, Kalyanpur and Sanani, Pawalgarh, Karari and Garappu, and Chunakhan, Dhamola and Kusamrauli. It has a total area of 37,945 acres, of which

* Notification No. $\frac{85F.}{200-77}$ of 6th February 1890.

† Notification No. $\frac{510}{XIV\ 200-123}$ of 6th July 1899

13,793 acres are in the hills. Karari, Kusamrauli and Garappu blocks were among the 15 blocks of various sizes which were reserved in 1899, when an addition was made to the sal and khair reserves.* Garappu is open to rights, but the others are closed. The Fatehpur range consists of four forest guards' beats and comprises the blocks known as Nihal and Mona, Bhakra and Fatehpur, Kathgodam and Beluti, and the Bhakra khair and Chaunsila blocks. Of these Mona, Fatehpur, Kathgodam and Beluti, with an area of 15,838 acres, are in the hills and the others in the plains, the total area of the range being 28,493 acres. The Bhakra khair block was reserved in 1899 under the same notification as Garappu. The Beluti block was added to the open reserves in 1890.†

The other ranges of the division in this district are the Chhakhata, Nandhaur and Jaulasal ranges. The Chhakhata range consists of sal on the *thuplas* or terraces below the hill patti of Chhakhata and some very fine haldhi below. It has an area of 39,524 acres, of which nearly half is in the hills. There are seven beats and seventeen blocks. Of these Ratighat, Gurkharak, Jampokhra, Shimlia, Patrauni and Asni are in the hills, and the remainder, Dolpokhra, Lakhman Mandi, Herai, Maulani, Sila, Gola, north and south Dolpokhra, Kotkharra, Sukhi and Kailas are in the Bhabar. Dolpokhra, Sila, Maulani and Kotkharra were reserved in February 1899, and Kailas, Sukhi and Gola in September of the same year. The Nandhaur range is wholly situated in the hills and has an area of 48,623 acres. It is divided into 22 blocks constituting eight beats. About one-third is sal forests and the remainder is chiefly khair and mixed jungle. The beats are known as Sankheri and Karakot, Bilot and north and south Selani, Ratarau and north and south Khopani, east and west Lobchula, Bulhsani and north and south Aonlakhara, Chilla and Gaunia Ran, Durgapipal and north and south Kholgarh and Kundal, Bettar and lower Nala. The Jaulasal range consists of the hill blocks of Chanugarh, Hathgarh, Chamuadhunga, Birgot and Bhargot, with an area

* Notifications Nos. 139/XIV—818A-93 of 27th February, 414/XIV—406-68 of 1st June, and 726/XIV—259A-83 of 2nd September 1899.

† Notification No. 818F—110A-23 of 6th November 1890

of 24,153 acres, and Hauspur, east and west Jaulasal, Sutlimath and Kalga in the plains, with an area of 27,700 acres.

From the year 1880 to 1890 the forest revenues were collected by what was known as the chauki system, under which two parallel series of depôts were established, at the upper of which all dues were realized and passes issued, and these latter were checked at the lower line of chaukis. During the first portion of this period, from 1880 to 1885, the felling of trees was regulated by an annual plan of operations in which were detailed the area to be worked, the number of trees to be felled, and the various works of improvement to be undertaken during the year. The first regular working-plan framed by Mr. Hearle for the Nandhaur forest came into operation in 1886 and in it fellings were prescribed for ten years. This plan, however, only continued in force till 1893, for in the following year a new working-plan was prepared by Mr. Bryant for all the forests of the division, and this is still in force. According to the present working-plan the forests are divided into ten working circles. In the hill circle timber is only supplied to right-holders; in the Sarkhet circle, between the Bhakra and Gola, selection fellings are made, but are limited to the supply of 200 *sál* trees given free yearly to His Highness the Nawab of Rampur. In the Nandhaur, Kathgodam and Kalaunia circles selection fellings are prescribed for the next 36 years, while elsewhere only improvement fellings for 20 years are to be made. Fire conservancy was first started in the Horai and Jaulasal forests in 1876, when 11,200 acres were protected. From time to time additional portions of the more valuable forests were brought under protection, till in 1902 the protected area amounted to over 65 per cent. of the whole. The work is facilitated by a complete system of fire-lines 100 feet and 50 feet wide according to the exigencies of the case. The number of failures in this direction have been but few, and the success of fire conservancy is assured; the people do not resent it as formerly, for they have discovered from practical experience that the quality of fodder grass is improved by protection, while the other numerous forest products by which they make a living in the cold weather

have greatly increased. The benefit thus afforded during the last 20 years is immense and is seen in the dense thickets of poles, saplings and seedlings which have come up in the old ruined forests. Another important branch of conservancy is climber cutting. The luxuriance of vegetable growth in the semi-tropical forests at the foot of the hills is perhaps most noticeable among the larger parasites; chief among these is the gigantic "elephant creeper" (*Bauhinia vahlii*). To such dimensions do these vegetable pests attain, that a single elephant creeper will sometime cover the tops of the trees over a quarter of an acre of dense forest. Suppression and extermination of these natural enemies are, therefore, among the chief factors in the future prosperity of a timber-producing area. Regular cutting operations were taken in hand in 1887 in the Nandhaur and the Kalaunia working circles, and these have been systematized and enlarged in the present working-plan so as to embrace all the forests in which either selection or improvement fellings are carried on. The average revenue of the division since 1880 has been Rs. 1,59,500, and the expenditure about Rs. 60,000. The division is well supplied with rest-houses, there being 15 bungalows for the convenience of the officers on tour, while the rangers and forest guards are provided with double-storied houses.

As the forests of the Kumaun Division increased in area and became too extensive for a single charge, the portions to the west of the Dabka were transferred to the Garhwál Forest Division, and some of the hill forests west of Kathgodam were made over to the Naini Tal Division. The history of the Garhwál forests belongs to the account of that district, for with the exception of the more recent additions the whole area lies within the borders of Garhwál. The blocks in this district lie on the low hills of Kotah, in the Chilkia Bhabar, and the north of Kashipur. They comprise the Kotah forests to which were added a portion of the Iron Company's grant; the Chilkia forest, a large and valuable area containing much fine sal timber; and the small Garhibulchand forest of the Chilkia Bhabar, lying between the Patharia and the western boundary of the district. In the last named the trees are chiefly sal but the soil does

not seem suited for the growth of large trees. In western Kotah, on the other hand, there is finer *sál* than in any other part of Kumaun. Formerly, as in the Kumaun Division the *chaunki* system was in vogue here, but this has been replaced by the "coupe" system, as elsewhere. A "coupe" or block of forest is set apart for felling for a year, and the produce is sold by auction. The purchaser thus obtains a monopoly, but has to pay royalty on export. The felling is all done under the supervision of the forest officials, and all the trees to be cut are first marked by the ranger. The headquarters of the division are at Naini Tal.

The Naini Tal Forest Division comprises two subdivisions, Naini Tal and Ranikhet, of which the latter lies in the Almora¹ district. The forests in and around the settlement of Naini Tal were demarcated in 1865, and taken over by Government with a view to supplying the local wants. Prior to 1845 all the trees were considered to belong to the villages within whose boundaries they were situate, and those within the valley were alone protected. Some years later the Commissioner took over the forests near Naini Tal, and no trees could be felled without his permission, a royalty being levied on each tree to meet the expense of conservancy. In 1879 these forests were gazetted as protected. Up to 1885 the subdivision formed a part of the Kumaun Division, but was then separated. The forests of the present Naini Tal subdivision lie on the southern and outer slopes of the Himálayas. Severe southern aspects, with abrupt scarps, rigid precipices and poor shales prevail, although the tract presents great varieties. The heights vary from 2,000 to 8,000 feet. The original reserved area was confined to Ranikhet, but several subsequent alterations occurred. In 1885 part of the Iron Company's grant was reserved and given to Naini Tal. This now consists of 36 square miles. In 1890 the Gagar and Ninglat reserves were added, with an area of 19 square miles.* In the following year the six square miles of the Dalmar Mora forest were taken in.† In 1898 a further addition of 30 square

* Notification No. $\frac{201F.}{574-26}$ of March 24th, 1890.

† Notification No. $\frac{818F.}{110A-23}$ of November 6th, 1891

miles near Naini Tal was made,* and this was followed in 1899 by four other reserves at Mukhtesar, Sat Tal, Ramgarh and Harial Danda, with a total area of eight square miles; but of this Mukhtesar is under the control of the Imperial Bacteriologist †. Lastly, the old cantonment of Khurpa Tal was made over to the Forest Department in 1902. Thus the total area of the Naini Tal subdivision is about 100 square miles. The dominant species are chîr and oak, with a small proportion of miscellaneous forest. Altitude and local conditions define their regions. The chîr usually occupies prominent ridges and spurs and hot open places, while the oak confines itself to the higher altitudes, northern slopes and cool areas. There are gregarious sâl areas below 4,000 feet in which *Terminalias* and other associated species find a place; but the miscellaneous trees are of little value. About 22 square miles are covered with chîr, 46 square miles with oak and miscellaneous woods, and the rest is unproductive. There was a regular forest survey in 1878, but the subsequent additions still require to be surveyed in detail. All external boundary lines follow natural features or else are demarcated artificially. Many of the natural boundaries need more distinct definition, but this process is in gradual operation.

A working-plan was framed for the Naini Tal reserves in 1888 by Mr. Fernandez and this was revised in 1896 by Mr. Hearle. The areas added subsequent to 1898 still remain to be brought under prescriptions. In addition to the conduct of these plans, the divisional officer is associated with those of the Naini Tal municipal and cantonment forests and the Mukhtesar reserve. Fire protective measures were introduced in 1876, and were extended as successive areas were brought under control. The physical and natural difficulties are almost insurmountable, yet the measure of success has undoubtedly been good: incendiarism has been responsible for the more serious failures; but the crime is not general, and free grants of grass and other privileges have enlisted the sympathies and assistance of many of the villagers. Protection costs roughly Rs. 2,500 per annum, but should be

* Notification No. $\frac{551}{XIV-213-125}$ of August 26th, 1898.

† Govt Gazette August 19th and December 11th 1899

considerably increased if the fortuitous element of luck is to be eliminated. Breaches of forest law are somewhat numerous, but except in the case of fires are of a petty character and are usually compounded. Crime is not serious, considering the floating character of the population, the traffic and the numerous patches of cultivation amid the reserves. A record of rights and privileges has been prepared for all the reserves and, since first sanctioned, there have been revisions of settlements entailing slight changes. A very liberal scale was adopted, as is obvious from the fact that the limits have never been reached. These rights chiefly refer to fuel, timber for dwellings and cow-sheds, and grazing. Only 32 square miles of the whole division are closed to all animals, the balance being partially opened. The forest is very heavily taxed in this direction as only the accessible blocks are utilized. The mischief is diminished by the annual migration to the Bhabar, although on the other hand the passage through the forests of sheep and goats imported by Bhotiyas, exceeding 27,000 head per annum, is a serious matter, as allotted grazing-grounds are denuded of reproduction. In this forest division the permit system is in vogue, and all the forest revenue is collected by retail sale. This method, which has taken the place of the old chauki system, is one that involves a vast amount of work for the Forest Officer. The timber trade of the Naini Tal forest is limited to the supply of timber for buildings at Naini Tal, Ranikhet and Almora—a constantly decreasing quantity. The chief work is that of supplying fuel and charcoal for the Naini Tal settlement—an expensive undertaking as the incidence of royalty per maund of wood is exceptionally small. The Naini Tal supply was worked at a loss for some time, and now only pays actual expenses. Since 1880 the average annual revenue from this division has been Rs. 67,400, and the expenditure nearly Rs. 55,000.

In the beginning of 1896 the whole of the waste land in the hill patts of the district was declared to be Government forest. It was styled "protected" and was placed under the control of the district authorities. The term "waste land" must be taken in its widest significance—it comprehends the whole of the lands

lying outside the village boundary and exclusive only of the reserved forests. The Deputy Commissioner was placed in direct charge, and a trained ranger was lent by the Forest Department to carry on and supervise the work of conservation. By this measure a large area was taken up and saved from speedy destruction : and not a moment too soon. The question of the denudation of the hillsides had become acute. Not only had several large grants in fee-simple been lately made, but the rapid spread of potato cultivation was becoming alarming. The method adopted by the cultivators was to clear a patch of forest and then to utilize the virgin soil for growing potatoes. This patch would become exhausted in two or three years, and then the process would be repeated, so that one village would clear a whole hillside in a very short time : the more so as they found this occupation very lucrative compared with the results obtained from the ordinary forms of agriculture. The increase of the population in Naini Tal, the growth of Ranikhet and, above all, the opening up of the railway from Bareilly to Kathgodam had tended to create a demand for this vegetable, and the ease with which it can be grown in this district made the crop a favourite one with the hill people. In the north of the district, especially towards Ranikhet, the hillsides have been laid completely bare, so that there is no hope of restoration by natural reproduction. In many places the stripping of the hillsides had resulted in the loosening of the cap-soil which fell with the next heavy downfall of rain. Hence in this district, and even more so in Almora, large areas of valuable "talaon" land have gone to utter ruin, and what was once a fertile valley has now become nothing but a boulder-strewn torrent bed. The loss has been considerable, both to the villagers who had to continue to pay revenue till a temporary settlement could be made in their favour, and still more so to the State, which has thus lost the income which would have accrued from some of the richest land in the district. The results of protection have already been beneficial : the threatened shortage of the fuel supply, which constituted a real fear for the future, has been now averted ; the remaining hillsides have been saved, and the standing menace to the cultivated lands from possible landslides as far as possible removed, and

far more serious matter—the unfavourable effect upon the rainfall which would result from the disappearance of the forests is no more to be feared.

It was only to be expected, the villagers raised a great cry at this measure, but the step was necessary and, moreover, they have been very generously treated. Every village has the right of free grazing in the adjoining forest, and every year they obtain a liberal grant of timber, which is almost invariably more than they actually require. If this prove insufficient for their needs, they are permitted to buy extra timber at a very greatly reduced rate. The great difference between the present and the old *régime* lies in the fact that all trees are now felled on a principle of selection, whereas in the past they were indiscriminately cut down as they happened to stand nearest to the village. Even under the present system control of the forests is no easy matter, and the damage done to the young trees by cattle and sheep is very large. It is not, however, possible to ensure close supervision over so large an area, and reproduction is very slow. Steps are now being taken to put selected forests under more efficient control.

The system adopted in the reserved forests is also followed here, as far as is possible under the very different conditions. No tree can be felled until it has been marked by the Ranger or his assistants the foresters, who act as Deputy Rangers. There is a regular record-of-rights for each village drawn up at the time of settlement: and the Forest Act is strictly enforced, so far as it applies to protected forests. The part of Forest Officer is taken by an officer of the district staff, who is placed in charge of the forests and deals with all offences and complaints in this connection, and is empowered to compound offences under section 67, subject to the control of the Deputy Commissioner. The total area of protected forest in this district, at the time when the forests were first taken over in 1896, was 220,371 acres, or 344 square miles. This has been subsequently reduced, although only to an inappreciable extent, by the transfer of certain small portions to the Forest Department, referred to in the account of the Naini Tal reserves. In 1900 the remainder of the forest was divided into

two ranges: the Gola range and the Kosi range, so called from the chief rivers which run through them. Each of these is in the charge of a forester under the Ranger, whose business it is to supervise their work, and to submit their reports to the officer in charge of the district forests.

In these district forests are found all the timber trees which grow in the hills. The most valuable are *chir* and *sāl*, but the large number of less useful trees classed as miscellaneous or *kukāt*, all have their use and help materially to swell the revenue derived from these forests; they are chiefly employed as fuel for lime and charcoal-burning, and, though issued free of charge to the right-holders, yet, as these works are generally carried on by contractors, they form an item of some importance. Although these forests were originally started for conservation and not for commercial reasons, yet they are self-supporting, and now show a considerable balance which ought under judicious management to increase. The income, which is credited to the Forest Department, showed a deficit of Rs. 1,130 in 1896, but for the three years ending 1902 has averaged over Rs. 3,400. The chief sources of revenue are sawn timber, charcoal, lime kilns and minor forest produce. They are mainly derived from contracts which are given out annually, the contractor in the case of sawn timber paying a royalty on each tree felled. As in the reserves, only the trees which have been marked may be cut. Right-holders obtain their timber at half rates. In all cases trees are paid for according to girth measurement and an established rate holds throughout the district. The minor forest produce, such as catechu, resin and fibre, is exported from the hills through the *chaukis* at Kaladhungi, Ramnagar, Kathgodam and Chorgallia, and the right to collect and sell such produce is leased annually by auction at Haldwani through the Forest Department. The contract system is also extended to the sale of fuel and grass for fodder: the right is sold by auction for each *parāo*, and the purchaser is bound to sell at a fixed rate at three annas per maund for fuel, eight annas per maund of dry grass and four annas per maund of green grass. Right-holders are allowed to graze free of charge, but a small sum is realized annually from outsiders under the head of grazing dues when

the Bhotiya traders or the inhabitants of the upper hills come and go from the Bhabar. The right-holders of every village have to submit an indent every August for the coming year. These indents must be first approved by the officer in charge and then the trees are marked by the Ranger. Chír and sál trees are given free of charge; unreserved trees may be cut by right-holders for their agricultural and domestic use without previous sanction.

At present the staff is very small and consists of a Ranger, with headquarters at Bhowali, two foresters stationed at Khairna and Bhim Tal, and six forest guards, at Bhowali, and on the Man-aghír, Binaik-dhura, Kutauli, Dhyanirau and Ohhakhata beats.

The civil forests of the Tarai and Bhabar are managed by the estate, having been removed from the control of the Forest Department in 1865. The reason for the transfer was their small value as timber-producing areas. The sál-covered patches, some of which extend for several miles into the plains, are, with the exception of Barkoli, almost worthless for timber, as the young trees generally become rotten at the core before they arrive at maturity. The trees in the Tarai are poor, but the sál of the Bhabar is of fair quality. Beyond occasional patches of khair and shisham in Bilheri, there are few trees of any commercial importance. The forest areas, however, are of great value as grazing lands and as fuel and fodder reserves. A small tax is levied on grazing and on the export of produce, and the proceeds are appropriated to the general improvement of the estates. The levying of these dues has been formally recognised and has been declared at successive settlements to be vested in Government.

The timber trees and forest produce of this district differ to a considerable extent according to the altitude and locality and present many peculiar features differing from those of the forests of the plains.

In the forests below the hills and those clothing the outer spurs the most common and at the same time the most valuable tree is the sál (*Shorea robusta*), which occurs from the Phika to the Sarda and also in the Dáns. It ascends the hills in places to 3 000 feet and is found in the valleys to a great distance inland

This tree is usually characteristic of the tracts which it affects, and though other trees occur, the sál predominates. It grows as a rule to a height of 60 to 90 feet, with clear stems from 30 to 40 feet long and six to eight feet in girth. It is the most valuable and lasting building timber and also supplies the best sleepers produced in northern India. For general utility it is second only to teak. The export of sál consists of logs, beams, sleepers, rafters and smaller scantlings and planks; a considerable quantity of dry poles are also exported for the native marts. Of the indigenous building timbers, sain (*Terminalia tomentosa*) is prized next to sál, and there is a fair demand for rafters and planks of this species. It is common in the submontane tract and the Dúns, attaining a height of from 80 to 100 feet, and a girth of eight or ten feet. The heart-wood is dark brown, tough, strong, elastic and very durable. It is used for indoor work, agricultural implements and boat-building. The haldu (*Adina cordifolia*) occurs abundantly in the open plains along the foot of the hills from the Sarda to the Ramganga and ascends the valleys to 3,000 feet. In the Bhabar are found trees of from 60 to 100 feet high, and with a girth of from ten to eighteen feet. The wood is yellow, smooth-fibred and fine-grained, and is fairly durable. This timber is largely exported in the form of rafters, beams and planks, chiefly to Anupshahr in the Bulandshahr district. When not exposed to the weather, haldu wood lasts well and is therefore chiefly used in the exterior of buildings. The dhauri (*Lagerstræmia parviflora*) is a handsome tree, common all over the submontane tract, where it attains a height of some 70 feet and a girth up to nine feet. There is a great demand for its timber which on account of its close resemblance to sál is styled "white sál" by the local traders, and is not unfrequently passed off as sál in the markets of the plains. The shisham (*Dalbergia sissoo*) occurs throughout the submontane tract in moist places, on the banks of streams and in islands in the rivers. The timber is of a high quality and is chiefly used in the manufacture of furniture in Bareilly. The khair (*Acacia catechu*) occurs in the submontane tract and up to 3,000 feet. As a timber tree it is not very largely employed, although the heavy, red, tough wood is of considerable value for agricultural implements and

similar articles. It is chiefly preserved for the resin or catechu which will be mentioned later.

In the hill forests the conifers clothe almost every ridge and valley, together with oaks, rhododendrons, maples, birches and others, and afford an inexhaustible supply of every class of wood equal in quality to that procurable in Europe. On the lower slopes a great variety of timber is found. The list includes most of the trees that occur in the submontane forests and several others, few of which deserve special mention. The most valuable is the tun (*Cedrela toona*). It is not now very common in this district, but is carefully preserved, as its wood is in great demand. It chiefly grows between 4,000 and 6,000 feet and attains a height of about 70 feet; the wood is close-grained, hard, capable of taking a high polish, and when properly seasoned makes an excellent furniture wood. The sándan (*Ougeinia dalbergioides*) is very common on the dry slopes of the outer hills, ascending to 5,000 feet and attaining a height of 50 feet; the wood is close-grained, hard, tough and durable; it is much valued for wheels, ploughs and furniture work. The har (*Terminalia chebula*) is not very common in this district, but is found on the China range above Dechauri. It grows to a height of from 60 to 80 feet. The timber is of a brownish colour, close-grained and heavy, and is used for the same purposes as sándan. The maples (*Acer pictum* and *Acer oblongum*) occur up to 7,000 feet. They are very ornamental trees, but the timber is of no great value. The Himálayan birch (*Betula acuminata*) is also common above 6,500 feet. The wood is close-grained and takes a fine satin polish: it is especially good for panels and indoor work. The rhododendron, which is very common in this district, is a less useful tree, as its timber is of a poor quality; it is chiefly employed for fuel and for inferior charcoal.

There are four species of oak found in this district. The commonest is the banj (*Quercus incana*), which occurs in all parts of the upper hills. The leaf is small and indented, and silvery grey underneath. The wood is used for buildings and agricultural implements and for charcoal burning, but is not of a very high quality. The karshu (*Quercus semicarpifolia*) occurs in Naini Tal and several other places in great

abundance, being usually found at high elevations. It has a small, shiny, indented leaf. The wood is hard and heavy and is used for building and furniture. The tilonj (*Quercus dilatata*) is common throughout the hills. It has a much larger and less shiny leaf than the karshu and bears the closest resemblance to the English oak of all the Himálayan species. The wood is hard, durable, heavy and of a brownish colour; it is considered the best for all general purposes. Lastly, there is the rianj (*Quercus lanuginosa*), a smooth-stemmed species with a large leaf, grey underneath. It occurs near Naini Tal and at a few other places. The wood is of a greyish-brown colour, hard, and very heavy and is not easily worked.

The conifers constitute the most valuable section of the timber trees of the hills both for quantity and quality. In many parts they occur in unbroken masses for miles and present a scene of great magnificence. The chír (*Pinus longifolia*) occurs throughout the Kumaun Division from 2,500 feet upwards. This tree appears to have the power of driving out all other vegetation from the tracts it occupies, and chír forests are interspersed only with a scanty undergrowth of the smallest shrubs. In many cases chír grows on slopes along the banks of the river and can be floated down without difficulty. One of its most valuable properties is as a turpentine producer, of which more will be said later. Of the other kinds, that known as *Pinus excelsa* alone grows in this district, but is not indigenous, as it is only to be found in the plantations on China. Next to the chír the most common of the conifers is the Himálayan cypress (*Cupressus torulosa*), called by the natives surai. This grows in great abundance at Naini Tal and other places in the district. In its general appearance it greatly resembles the silver fir of the Himálayas. The older trees in a favourable climate grow up in a slender column with a yellowish green foliage. At Naini Tal the boughs with a southern aspect are fuller and more regular, giving the tree a lop-sided appearance. The cypress has an average height from sixty to one hundred feet, while the girth varies from six to twelve feet; but these measurements vary with the position and elevation. The wood is hard, tough and of reddish colour. It was formerly used extensively for

house-building in Naini Tal and is freely employed for indoor work throughout Kumaun. There are no natural groves of deodar (*Cedrus deodurus*), the Himálayan cedar, in this district. The chief plantation is that on the China range near Naini Tal, where it has flourished greatly; nowhere do we find the magnificent groves of deodar which so often surround the temples in many parts of Almora. The only other conifers that occur here are those which have been planted experimentally on China. These include the Himálayan silver fir (*Abies webbiana*), which is common in Garhwál and the north of Almora; the Himálayan spruce (*Abies smithiana*), which grows naturally in the north of Garhwál; the Himálayan pencil cedar (*Juniperus excelsa*), which comes from the north of Almora and Nepal; and the ground cypress (*Juniperus communis*), which also comes from high altitudes in the north.

The other trees of the district are of little importance, and only the bamboos and the fruit trees call for any separate mention. Bamboos form the most important portion of the minor forest produce of all forest divisions and one that increases in value every year. They are of many varieties, from the small ringals which grow abundantly in the hills and are used for matting, baskets and innumerable other purposes, to the large bamboos of all kinds and sizes which grow in profusion along the foot of the hills and throughout the submontane tracts.

In the Naini Tal forest division one of the most important sources of income under the head of minor forest produce is turpentine. A still was established at Bhowali in 1895, and has proved a great success: in five years it had repaid all capital and maintenance charges. Operations have recently been extended, and profitable results are anticipated. In 1901 the manufacture was doubled at the cost of only half of the original outlay. The turpentine is obtained from chír, each tree yielding on an average 2.25 sérs of resin, although better results are expected for the future. In the Kumaun division there is a large income under this head, which includes drugs, tans, dyes, gums, reeds, fibres and grasses. The most important is catechu an extract from the khair tree. The work is carried on by Doms from November till the rains. A considerable

amount of gum is extracted from the babul (*Acacia arabica*) of the Bhabar, and in this tract, too, lac is also found and collected. The forest of the lower hills and the submontane tract yield an immense quantity of materials for ropes, cordage, twine, basket-making and matting. The *babar* grass alone is sufficient to supply all India with a valuable material for making coarse cordage and paper. The principal markets for minor forest produce are Chorgallia, Haldwani, Kaladhungi, Ramnagar and Chilkia. Good roads connect all these marts with the different lines of railway, the construction of which has considerably enhanced the commercial value of forest products.

The fruit trees of the district fall into two main classes, the first comprising those which grow wild, and the second those which have been introduced from Europe or elsewhere and are cultivated in gardens and orchards. Both classes contain a goodly number of species, but varying much in quality. Most of the European fruit trees have been introduced from the Government plantations at Ranikhet and elsewhere. The cultivation of fruit has been greatly encouraged by the growth of the settlements at Naini Tal and Ranikhet, and in some instances the European planters have found it more profitable to grow fruit than maintain the old tea plantations; the fine orchards of General Wheeler at Ghorakhal and Mr. Deriaz at Ramgarh supply Naini Tal during the season and export large quantities of fruit to Calcutta and other places. Among the wild fruit trees there are the walnut, which both grows wild and is planted throughout the hills; the pomegranate, which also is found in a wild state throughout Kumaun; the wild pear and apple, useless species, which, however, supply good stocks for grafting; the wild cherry and the jamun. The cultivated fruit trees are very numerous; the most common is the mango, which flourishes exceedingly well in the Kotah Dun; while the others include apples, pears, cherries, citrons, limes, oranges, guavas, peaches, apricots and plums. Almost all of these are favourite objects of cultivation with the natives and are sold in large quantities in the Naini Tal markets.

The zoology of Naini Tal is very varied and deserves some attention. The wide range of climate and elevation furnishes a

list which comprises most of the animals of the plains as well as those of the hill tracts of these provinces.

Wild elephants are still to be found in considerable numbers between the Sarda and the Ganges. Their principal *habitat*, however, is the Patli Dun and the lower parts of Garhwal, although fair numbers occur in the eastern half of the Kumaun forest division. In former years they were much more numerous. The common practice was to catch them in pits, but this caused such loss of cattle that it was prohibited in 1817, and thereafter all elephants found in pits were confiscated and sold on behalf of Government. The system was highly uneconomical, for fully three-fourths of the animals captured were either fatally or seriously injured. The restriction was, however, removed in 1827, and rules were framed for the digging of pits and the collection of dues on the capture of elephants. Little advantage accrued from this permission, either to the persons engaged in catching the elephants or to Government. After the mutiny a regular *kheddah* was established at the foot of the hills for the purpose of catching elephants for the public service, but this was soon abandoned, and but few operations were conducted in this district. At present no one is allowed to kill or capture an elephant without special permission of the local authorities, and this is only given in the case of solitary old males which are often very dangerous to human life.

The tiger is found here and there from the Tarai up to the highest points of the district, those which resort to the hills migrating from the Bhabar. Forty years ago tigers were very numerous in all parts, but owing to the extension of cultivation, the growth of population, and the greater use of arms of precision, their numbers have vastly diminished. In the Tarai the tiger attains a very large size, and several animals of over ten feet in length have been obtained. But the official returns, which are necessarily far from complete, show what a diminution in the number of animals there has been. From 1860 to 1880 rewards were paid in the Kumaun district for the destruction of no less than 624 tigers, an average of over 31 yearly. From 1892 to 1900 inclusive the number was 161 in all, excluding seven cubs. The total average has thus fallen to only 18 annually, while since

1897 it has been under 14. During the same period 32 persons were killed by tigers. The whole of the Tarai long held an unenviable notoriety as well for the insalubrity of its climate as for the number of tigers it harboured. The returns can only be considered as approximate, for in many cases the reward was not claimed. The panther or leopard is much more common. It occurs throughout the Tarai and Bhabar, and is frequently found at all elevations in the hills: it is a slightly-built, wiry animal with enormously powerful forelegs, and is for its size the most fearless and savage of the cat tribe, attacking an elephant without hesitation when brought to bay; it is a most destructive animal, and does immense damage to cattle, sheep and goats. The number of rewards paid for the destruction of leopards or panthers between 1860 and 1880 was 2,718 for the old district of Kumaun. Between 1892 and 1901 the number of rewards paid for leopards killed was 454, including cubs, which gives an annual average of 49 animals, from which it would appear that their numbers have also diminished to a considerable extent.

The brown bear of the upper Himalayas does not occur in this district, but two other species are found in considerable numbers. The first is the Himalayan black bear (*Ursus tibetanus*), which is met with throughout the hills down to 3,000 feet, but is now very rare. This animal does not hibernate in this district; it is a bold creature, doing great damage to the crops and fruit trees, and occasionally attacking sheep. The other is the ordinary sloth bear (*Ursus labiatus*), and is found occasionally in the sal forests of the lower hills and in the Tarai, where it lives in swampy ground and marshes. Its principal food is ants, beetles, fruits, roots and honey, and it rarely consumes flesh. Of both kinds, 146 were killed between 1892 and 1901, or rather rewards were given for their destruction. They seldom kill human beings, only two deaths being reported from this cause for the same period.

Several species of the stag and antelope tribes are found in this district. The largest and finest is the well-known sambhar or jarau as it is generally called here (*Rusa aristotelis*). This animal is found in all the great forests, not only in the Tarai and

Bhabar, but also in the hills, where it occurs up to all heights. Those that permanently frequent the hills possess more massive horns and are more robust in build than those of the Bhabar and Tarai. Sambhar are not found in any great numbers now, for the females are not so prolific as those of other stags, and the species has become somewhat scarce owing to the exertions of sportsmen and the reduction of the jungle area. The commonest of all the stag tribe is the spotted deer or chital (*Azis maculatus*), which is found in the forests along the foot of the hills, but never occurs beyond the second range of low hills. They are gregarious, and the herds consist of ten or twenty, but when the grass is burnt they crowd together for mutual protection. They have suffered greatly at the hands of native hunters, who have almost exterminated them in places where they were once abundant. Unlike the sambhar, who sheds his horns in May, chital lose theirs at irregular times from October to March, but chiefly in October and November. The stags begin to rut as soon as their new horns are perfect. The swamp deer or gond (*Rucervus duvaucelii*) was formerly plentiful all through the Tarai, but the clearing of the jungle has reduced its numbers. It seldom occurs west of the Dabka, but even to the east it is nowhere common. It chiefly affects swampy ground covered with reeds and tall grass; but it is also found at certain seasons in dry tracts where there are patches of long grass along the edge of the sal forests. The stags shed their magnificent horns in March. The hog-deer or parha (*Hyelaphus porcinus*) is found in grassy swamps and grass jungle along the banks of streams from the jungles of the Tarai to the foot of the hills. The rutting season occurs between October and February and the horns are shed in March or early April. The barking-deer or kakar (*Cervulus aureus*) is common throughout the forests from the Bhabar to the highest hills of the district. Its hard bark may be heard at all times of the day or night, but it seldom ventures out into the open. It is generally a solitary animal, except during the rutting season of October and November, when two or three may be seen feeding together. The males shed their horns in May. The nilgai (*Portax pictus*) is only found in a few patches of forest along the foot of the hills,

and usually close to cultivation ; it does much damage to young wheat, and no ordinary fence will keep it out. The four-horned antelope or chansingha (*Tetraceros quadricornis*) is also found occasionally in this district, chiefly in the low plateaux and hills covered with sál forest and the dry jungle between them and the Tarai. It is generally seen alone or in pairs and is usually found in grass patches or glades in the forest. The well-known Indian antelope or blackbuck (*Antilope cervicapra*) occurs in herds here and there in open plains or low grass jungle of the Tarai, but the horns are small and rarely exceed eighteen inches. Besides these, we have in the hills the gura, or Himálayan chamois (*Antilope duvaucelii*). This animal is found throughout the outer ranges of the Himálaya from 3,000 feet upwards. Gural generally occur in parties of three and four ; but in places where they are abundant herds of ten and twelve are met with. The female produces her young, generally one, though sometimes two, in April or May. The sarau or forest goat (*Nemorhaedus bubalina*) is a strange-looking animal found in most of the rough, rocky hill forests above 3,000 feet. It affects precipitous, densely-wooded places, is solitary in its habits, and is rarely seen in the open except at dusk and early dawn. It is very fierce when brought to bay by dogs, and can inflict severe wounds with its short sharp horns. Its flesh is very coarse, strong and unpalatable. The female, which like the gural also carries horns, produces one kid, generally in March or April.

The wolf is found throughout the submontane tract, but does not seem to enter the hills. Rewards are given for the destruction of this animal, but it is not very common. Far more destructive is the wild dog (*Cuon rutilans*). These animals occur throughout the Tarai and Bhabar ; they are migratory in their habits and hunt in packs. They live chiefly on deer, and especially the sambhar, which, on account of its weight, is more easily run down, but they also kill large numbers of cattle in the forest clearings. A small pack of wild dogs seems to strike terror into a jungle, which is rapidly deserted on their approach. Even the tiger is said to fear the wild dog, which is the most fearless and impudent of all Indian la.

The amount of game destroyed by them must be enormous; especially among the chital and sambhar, far more of which must fall yearly to the red dog than to the rifle. As soon as they have thinned out one jungle, they go on to the next, often boldly following the high road. A reward is given for their destruction, but the average number of payments does not exceed one yearly, and in no year have more than four claims been presented, although they have greatly increased in numbers of late years. Jackals are nowhere more common than in the Tarai and the scrub jungle along the foot of the hills. They ascend the valleys communicating with the plains, but are seldom found above 7,000 feet. Their ordinary food is as usual carrion, but they kill a great many young deer and often catch pea-fowl and are very fond of maize. They are most persistent in following a wounded deer, but they rarely venture near it until it is so exhausted as to be obliged to lie down. Jackals frequently go mad and are then more dangerous than mad dogs, as they attack all living beings they meet. Hyænas are common in the submontane tract, but seldom enter the hills. They frequent broken raviny ground, where cover is abundant, sometimes in forest and sometimes in thorn jungle and sandy watercourses, where there is plenty of long grass. The hyæna is a skulking, cowardly animal, nocturnal in its habits; it sometimes kills dogs, sheep and goats, but generally feeds on carrion. A reward of two rupees is given for the destruction of each animal.

* The common Indian monkey found all over these provinces occurs throughout the district up to heights of 7,000 feet. These animals generally establish themselves on a steep bank in a mango grove near a village or in forest or precipitous ground near outlying cultivation, whence they emerge when unobserved and do immense damage to cultivated crops. Perhaps a more common species in this district is the *langur*, large herds of which are to be met with throughout the wooded portions of the hills at all heights. They feed on fruits and flowers and on the buds and young leaves of many trees and plants, but from August to February acorns form their chief diet, and during those months they are to be found in all the oak forests.

They are fond of potatoes, but seldom attack other crops. They are especially prevalent around Naini Tal and in the mixed forests of the Bhabar. The Himalayan *langur* is easily distinguished from the Bengal *langur* by its hands being concolorous with its body, and by its loud grunting note of alarm, while the hands of the latter are jet black and its voice is more of a deep bass mournful bellow.

The other mammalia call for no detailed mention. They include the badger, porcupine, the common Indian fox, the hill fox, the otter, black-capped marten, the hare, wild pig, the pigmy hog of the Tarai, several species of wild cat, bats, moles, shrews, rats, squirrels and the mongoose. Porcupines are very numerous both in the hills and the submontane tracts, making their own burrows in the level country, and using natural caves and crevices in the hills. Wild pig occur in large numbers at all elevations and do immense damage to potatoes and other crops. In the hills they especially frequent the oak forests, and here, as a rule, the largest boars are found. The pigmy hog (*Porculia salvania*) is rare: it occurs in the Tarai and Kashipur, and its flesh is greatly prized by the Tharus and Bhuksas.

There are some eight or nine species of lizard found in this district, all of them being fairly common. One of the most familiar sights to the traveller in the hills is that of the large "blood-suckers" that run in and out of the crevices in the walls at the sides of the hill roads. They grow to a length of about 15 inches and are beautiful creatures, gleaming with every colour of the rainbow. In spite of their name they are perfectly harmless. Besides these, there are the large common water-lizard, which is found as great as four feet in length and is common near water as its name implies. Then there are two or three smaller lizards whose predominating colours are green and brown and are found everywhere, and are only to be distinguished by the naturalist. Of the snakes, 23 species are recorded as being found in this district. Of these 15 are entirely harmless while the remainder are venomous in a greater or less degree. All the harmless snakes belong to the colubrine order and are for the most part common in

both the Bhabar and the hill pattis. The commonest of all is the well-known "dhaman" of the plains, that grows to a length of some seven feet. It is of a light brownish olive in colour, with a long pointed tail. When beset it assumes a very pugnacious attitude and strikes out in the most ferocious manner, but without doing any damage. The grass-snakes are very common on the grassy slopes of the hills at all elevations, and many may be seen by the roadside in a day's walk in all parts of the district. Of the non-venomous snakes the largest and far the most imposing is the python, which is found fairly frequently in the Tarai swamps and in the moist valleys of the lower hills. This snake grows to a length of thirty feet, though specimens of this size are undoubtedly rare. The python is a most handsome creature with the most gorgeous colouring; its strength is enormous and it can squeeze any living animal to a jelly. A moderately large python can swallow a fair-sized chital. Out of the eight venomous snakes three are far more common than the others; these are the cobra, karait and Russell's viper. Of these the first two are too well known to need any description; they occur in all parts of the district. Russell's viper is a reddish-brown snake that grows to about four feet six inches in length. It has three rows of blackish-brown annular ocelli surrounded by an inner white and an outer black ring down the back and sides. A broad-arrow mark on the head formed by two pale lines from the snout over the eyes to the temporal region forms another distinctive feature. There are three other vipers found in this district, but they are not common. As in all parts of India, the number of deaths attributed to snake-bite yearly is large.

The commoner birds of this tract are those which are found throughout the Himálayan range; but situated as it is, many stragglers from the surrounding regions are found among the rarer birds. This district is peculiarly rich in bird-life, as besides the hill pattis it embraces a large area of plain and forest in the Tarai and Bhabar, much of which consists of the marshes and savannahs so dear to many genera of birds. Thus with an elevation ranging from over 9 000 feet to the low lying swamps of the Tarai there is a happy hunting ground

for the ornithologist that it would be hard to equal in any part of India. Numberless birds make their home in this district, and very many resort here as migrants during different parts of the year. About 450 species have been recorded as having been seen in this district, the greater number by far of which also breed here. A complete list is given in Oates' work, so that it would be superfluous to attempt anything in a nature of a catalogue in an article of this description. In the hills are found nearly all the Indian eagles, vultures and many of the hawks; of the first there are some twelve species and seven kinds of vultures are known. About 24 varieties represent the hawks, kites, buzzards and ospreys. Owls, woodpeckers and kingfishers abound; cuckoos are particularly noticeable for their variety; shrikes, thrushes and babblers also occur in great numbers in the hills and plains alike. Of the smaller birds, finches, tits and warblers, it may be said that their name is legion. The sheltered Duns form an admirable abode for birds, with their abundance of water, forests, and wild climate.

The district is well supplied with game-birds of every description, from the peacock to the jack-snipe. Of the pheasants there is the magnificent munál, which descends from the upper ranges in the cold weather to the higher parts of this district; he never comes down far below the snow-line, but prefers the wooded tops of hills, where he may frequently be seen in the open when he comes out to catch the early morning sun. The munál is rivalled by the koklas and the dungí or Himálayan argus-pheasant, which are not very uncommon in this district. More frequent are the chír and kalií pheasants, the latter especially abounding in the lower hills. Jungle-fowl are found in vast numbers in the forests of the Bhabar and Tarai. Several varieties of partridge occur: the common grey partridge and the black partridge abound in the Tarai, and that grand sporting bird, the chakor, is common in the hills. Besides these there are the two hill partridges, known as piura, which are found above 5,000 feet in small numbers. Seven species of quail belong to this district and occur in great numbers in the Tarai and Bhabar, enormous bags have been made near Haldwani

when the quail come up from the plains after the cutting of the rabi crops in April. The greater and lesser florican are both found in the open grass stretches of the Tarai, the latter being more rare than its larger congener. Snipe, too, of the usual three varieties are to be found in the hills of the Tarai in the cold weather, especially towards the end of the season, but for some reason or other the snipe of this district are not such good eating as those of the plains. Wood-cock are found in small numbers in the ravines of the hill pattis. Water-birds and wild-fowl are numerous in the swamps of the southern parts of the district as migrants in the winter months; all the ducks, teals and pochards that are found in the plains are to be met with here too. They do not breed here, with the probable exception of the spotted-bill.

Fish are generally used as an article of food throughout this district by all classes, with the exception perhaps of a few Brahmans and Banias. The Tharus and Bhukas of the Tarai are great fish-eaters, as also are the Doms of the hill pattis. Hitherto no sustained and systematic efforts have been made to protect fish from the reckless poaching that is the natural result of this proclivity; but the question has recently been considered, and good results may be shortly expected from the preservative measures that are being taken in hand. Already something has been effected in this direction, as the fishing in the lakes is regulated by a system of licenses. The hillman needs no education in the way of poaching; he has learnt the use of dynamite, lime and otters, and he has no sporting instincts to hamper him in their use.

Except in the lakes, fish as "forest produce" belong to the District Forest Department, and therefore no fishing is allowed except to right-holders without a permit issued by the district authorities. Fishing is granted as a right in the settlement of each village, and thus an indirect hold is kept over poaching; but much more stringent measures are needed if any real good is to be effected in this direction. The mahseer, especially, needs a helping hand: this fish, so good for food and sport, commences to run up the smaller streams about the end of March or the beginning of April and in June or July arge specimens,

weighing from ten to fifteen pounds, may be seen in little streams no more than a few yards wide. These are all heavy with spawn and fall easy victims to the poacher. Where the streams are narrow and run between rocks the Doms fasten a series of strings with sharp barbed hooks three inches apart to the rocks on each side, and thus secure a vast number of the larger fish. In the hills, too, the practice of poisoning pools with various vegetable drugs is common. Another well-known method of poaching is by placing lumps of meal poisoned with *blang* in the shallow bays of lakes and the backwaters of rivers. The drug renders the fish insensible and they are thus easily secured the next morning. In 1899 the operations of the Indian Fisheries Act were extended to the Naini Tal, Sat Tal, Malwa Tal, Bhim Tal and Naukuchhiya Tal lakes, as well as to certain portions of the Kosi, Baur and Gola river.* In 1902, however, the lakes were excluded from the operations of the Act. Fish are universally eaten by the casteless classes that form the bulk of the population. It is unnecessary here to enter into a description of the various species of fish found in this district. In the hills the most common is the mahseer (*Barbus tor*), and in the Tarai are found the same kind as those which occur throughout the United Provinces.

It is very difficult to estimate the number of domestic cattle in the district, for it varies with the population, vast numbers of animals migrating with the hill people to the Bhabar from the upper patts of the hills in the cold weather. There they remain from October to May, sheltered in temporary sheds. In the Tarai, too, the cattle temporarily increase in numbers every year by reason of the droves brought up from the plains for pasturage. Consequently the only figures available are far from accurate. The last cattle census took place in 1904. It was then ascertained that there were 114,118 bulls and bullocks in the district and 155,287 cows, as well as 76,519 young stock. To these must be added an indefinite number imported in the winter to find pasturage in the Bhabar, and an equally indefinite number which paid grazing tax in the Tarai and which came from other

* Notification No. $\frac{2082}{1-483B}$ of 17th June, 1899.

districts. In the hills the domestic cattle of indigenous origin are small in size and usually red or black in colour. Early every morning the village herds are driven to the ridges of the neighbouring hills for pasture, and are again collected before sunset and housed either in the lower storey of the dwelling-house or in a temporary shed erected close to the village site. As a rule the milch-cattle are not fed on grain or chaff, but are only pastured, and after the harvest are allowed to eat down the stalk remaining in the fields. Neither bullocks nor buffaloes are used for commercial transport, but they share with ponies and women the duty of carrying their owners' baggage in the annual migration to and from the Bhabar. Below the hills most of the bullocks are bred in the Bhabar itself, or else are imported from Kheri, Pilibhīt and the north of Oudh. Several attempts have been made to improve the local breed but without success, for the finer kinds brought from Hissar could not stand the climate and were considered too heavy for common purposes. Buffaloes are kept for milking purposes and manure. At the 1904 census male buffaloes numbered 113,435; they are chiefly confined to the Bhabar and Tarai. Cow-buffaloes amounted to 38,369—a comparatively small number, which is very greatly exceeded by Almora.

Sheep and goats at the time of the cattle census numbered 37,257 and 36,398 respectively; in the cold weather large flocks are brought up to the Tarai from the plains about the end of October for pasture. They consist for the most part of ewes, and as soon as the lambs are sufficiently strong, they are taken again to the plains. Goats and sheep are kept for wool, for food and for penning on the land. Goats in the hills are not milked, but are solely kept as articles of food and suppliers of manure: no man, it is said, who possesses a large flock of goats ever has poor crops. The large Tibetan sheep which are brought down as pack-animals by the Bhotiya traders are not included in the figures given, for they are merely beasts of burden and cannot be included in the agricultural stock of the district. The sheep brought up for the supply of the Naini Tal market usually come from the Kangra and Kulu districts of the Panjāb-Himālaya, although many come from the middle

Duab, and though smaller in size yield excellent mutton when fed on gram for a time. The hill sheep are small with wiry brownish-grey wool, short tails and long horns. They are not of a high quality and are chiefly valuable for their wool, out of which coarse blankets are made. Goats are sometimes imported from Tibet for food or sacrifice, but their flesh is very strong and ill-flavoured. The indigenous breed is raised in the same places and by the same people who keep the indigenous sheep.

The number of ponies at the stock census of 1904 was 9,654—a figure which is far in excess of the total of Almora and Garhwál together. The Tibetan or hill pony, generally known under the name of *ghunt*, are the best and often fetch high prices. They are clumsy, rough and small, but very strong and active, sagacious, docile and sure-footed. The pony, however, in more common use is the *bunjára* variety, which is bred in large numbers along the foot of the hills. It is a very hardy and useful, though small, animal, and does most of the carrying work between the plains and the hill sanitarium.

Cattle disease appears to be endemic in the hills, the Bhabar and the Tarai. Rinderpest broke out first in 1850, and there were violent epidemics in 1864 and 1872, since which time it has been always present. Foot-and-mouth disease seems to have been prevalent at all times, and dysentery or *chira* causes great havoc in the Tarai. The disease known as *surra*, too, often appears in the Bhabar, attacking cattle and horses, and its ravages have frequently been such as to disorganize the tonga service between Kathgodam and the Brewery. It would appear from the returns that in the Tarai a damp winter causes the greatest mortality; disease is undoubtedly connected with the moist climate, and it has been suggested that one of the chief causes is the absence of salt-licks for the cattle, salt being especially necessary for health in the presence of excessive moisture. In order to combat cattle disease and to reduce its ravages by inoculation, a veterinary assistant was posted to the district in July, 1894. Since that date there has been a steady and constant decrease in the mortality. In 1893 the ravages of disease were so great that it

destroyed plough-cattle to such an extent that its effects were visible in a shrinkage of the Tarai cultivation and a falling off of rents. From 1894 to 1903 the average cattle mortality was 6,981·7 deaths annually; but since 1898 it has only been 2,994. During the decade, the average mortality from rinderpest was 1,989; from foot-and-mouth disease 2,417; and from dysentery 2,575. These figures do not include deaths from other causes. In 1898 a disease locally called *phatkia* appeared in the hill patts; this is probably another name for rinderpest, which is called *manrog* in the submontane tracts.

The extraordinary range of elevation in the district occasions an endless variety of climate in the different parts. There is only one regular meteorological station, that at Mukhtesar, in the district, but no statistics are necessary to emphasize the difference in climate between, for example, Naini Tal, Haldwani and Kichha, all of which lie on the single highway that traverses the district from north to south. In the Tarai to the south the climate differs from that of the adjoining plains country, chiefly in the variations of temperature between the day and night, which are due to the nature of the soil and are the proximate cause of the heavy sickness which attacks the inhabitants of the tract at the commencement of the hot weather and towards the end of the rains. The large areas of jungle and forests, moreover, have a most pernicious effect on the climate, while the line of springs towards the north and the high water-level in all parts necessarily render the tract most unhealthy. The excessive moisture, combined with a great heat, is always productive of malaria, ague and kindred sickness. After the beginning of May the climate begins to be dangerous to Europeans, while in the rains it is positively deadly. In the hot weather and the rains a sharp attack of a peculiarly malignant type of malarial fever is the certain penalty for going out before the sun is well up or remaining out of doors after five o'clock. It is said that by exercising caution in this matter and a careful use of mosquito nets it is possible for Europeans to remain in the Tarai for a short period during the rains, but as a matter of fact few have been known to do so with complete immunity. The climate of Kash p r a very sum ar to that of

the Tarai, although it improves greatly in the extreme southern portion. Both in Kashipur and the Tarai the clearings, and especially the older settled villages, are much more healthy than the remainder of the tract, and this is also the case in the Bhabar. In the latter portion of the district the climate on the whole is not much better than in the Tarai. Mr. C. H. Robert-writes: "The climate is at all times of the year trying, owing to the proximity of the hills the circulation of the air being much retarded; the direct and refracted sun heat makes it close, hot and muggy. In the months of August, September and October, when forest undergrowth grows up, the climate is extremely malarious; during other portions of the year the climate, though enervating, is not so unhealthy. During most of the year at the mouth of the valleys or passes a nasty cold wind sets in after sundown, which is trying to the constitution after the heat of the day."* In the highly afforested tracts east of the Nandhaur, where, too, a very high spring-level exists, the climate is extremely malarious except during the cold weather months; that of the tract of country westwards has much improved since it has been opened out and cultivated; nevertheless the inhabitants suffer severely from fever, especially from July to October, and in a greater degree those who live on the southern limits of cultivation owing to their proximity to the Tarai swamps. The southern portion of Chilkia in the extreme west of the Bhābar greatly resembles the Tarai and the hillmen are quite unable to stand the climate.

In the hills an entirely different state of things prevails. At Naini Tal the thermometer seldom reads above 85 degrees at any time, while in the coldest part of the winter months it has an average of about 32 degrees, although the bright sun renders the cold little felt. Naini Tal itself is colder than the rest of the hill tracts, owing to its shut-in position and the dampness resulting from the heavy rainfall. The meteorological readings taken at Mukhtesar show a maximum of 85° and a minimum of 25·5° in the shade for the year 1900, and this is probably about the general range of temperature in all years. At lower elevations, and especially to the north of the first range of hills the temperature

rises rapidly. Almora and Ranikhet are much hotter than Naini Tal, and at the same time the humidity is very much less. Frequently during the rains the headquarters of the district are enveloped in clouds, while the sky is almost clear beyond the Gagar range. Lower down, the malaria, which produces such an effect in the Tarai, extends into the depressed rich valleys on the banks of the Kosi and other rivers, and generally into all places of low elevation. These spots, though fertile, are often very hot, and are all considered more or less unhealthy, particularly at the end of the rains. The medical aspects of the district will be dealt with in Chapter IV in dealing with the dispensaries and medical arrangements, most of which are in the hands of the District Board.

The variation in the climate is very largely due to the difference in the nature of the rainfall in the several parts of the district as well as to the change of altitude and the varying configuration of the surface of the ground. The greatest fall of rain occurs on the outer slopes of the hills, the southern face of the lofty Gagar range appearing to attract the rain-clouds and precipitate their moisture. It is a remarkable fact that Naini Tal itself, owing to its position on this southern slope, receives double the rainfall of Ranikhet, and even Mukhtesar, which stands at a great elevation, has a far smaller rainfall than the district headquarters. The zone of heavy rainfall extends from the great peaks of the Gagar range to the bottom of the hills. In the Bhabar the rainfall is decidedly heavy, and further south in the Tarai the average is much greater than in the southern districts of Rohilkhand, but it rapidly decreases towards the southern border. In the hills seldom a month passes without rain in some part of the district; the rainy season begins earlier than in the plains and lasts up to the end of September. There is almost always a considerable winter fall in Naini Tal, which becomes snow on the heights and rain in the valleys; it is heaviest in the month of January. Snow generally falls every year in almost all the hill patts, but it is seldom of long duration.

Rain-gauges are maintained at Naini Tal and Mukhtesar in the hills, at Haldwani, Ramnagar and Kathgodam in the Bhabar and at Kilpur Nagla Rudarpur and Kashipur in the

Tarai Records are available for Naini Tal since 1856, and for Kashipur, Rudarpur, Kilpuri and Haldwani since 1870. The rain-gauge for Ramnagar dates from 1891, that at Nagla from 1894 and Kathgodam from 1896. The average fall for Naini Tal is 97.49 inches, the greatest amount recorded in one year being 154.88 inches in 1893, and the least 67.1 inches in 1887. July and August are the wettest months, and November and December the driest. At Kathgodam the average fall is 91.27 inches: it generally varies with that of Naini Tal, but not exactly, for in 1898 for instance the rain-gauge recorded a fall of over 22 inches in excess of that at Naini Tal. Of the Bhabar stations, Haldwani has an average of 81.8 inches and Ramnagar 65.68 inches. This illustrates the general phenomenon that the rainfall is much heavier in the eastern portion of the Tarai and Bhabar than in the west. Thus Kilpuri has an average of 64.08 inches, while Rudarpur in the the centre of the Tarai shows 57.97 inches, and Kashipur in the east only 46.4 inches. This feature reacts not only on the climate, but also on the agriculture, for in pargana Bilheri there is in consequence less need of irrigation works.

CHAPTER II.

AGRICULTURE AND COMMERCE.

In the hill patts the soil classification in vogue resembles that of Almora. The best irrigated land is known as *talaon*, while other irrigated soils, which are imperfectly or precariously watered, are generally called *panchar*. This irrigated land produces a constant succession of wheat and rice, but a third or hot-weather crop is very unusual. The finest is generally to be found deep in the river beds, where, being alluvial in formation and subject to the influence of a hot climate, it is most productive. Such lowlying plots are generally known as *seras*. They are watered by cleverly constructed channels or *guls*, which are taken off from the main stream at a suitable level and sometimes run for a mile or more, driving water mills and irrigating more than one block of fields on their way back to the river. Such channels form the only source of irrigation. They are also brought round hillsides from the small water-courses to irrigate upland cultivation. These upland fields, when not watered artificially, are designated as *uparaon*, which, as in Almora, is divided into two classes. The first class produces wheat followed by mandua, and then for one rabi crop it remains fallow, to be followed by rice, and so on in rotation. This is the usual series of crops, but in the best villages, where there is plenty of manure, it is not uncommon to find first class *uparaon* always under cultivation. Mandua is occasionally varied by some kind of bean, such as *gohat* or *bhat*, in order to prevent the exhaustion of the soil, while small varieties of urd and mung are also grown. Second-class *uparaon*, which generally differs from the rest on account of its distance from the village site, has practically the same rotation; but barley is grown instead of wheat, while the place of mandua is taken by the inferior millets. The remaining cultivated land, which consists of untierred fields

irregularly tilled, is known as *katil* in the settlement papers, but among the villagers it is also commonly styled *ijran*, as in Almora. Such land lies on the natural slope of the hillside and is occasionally cultivated in the kharif when, after a period of fallow, bushes have grown which can be burnt for manure. Potatoes are grown on the natural slopes of the hillside between 5,500 and 8,000 feet in clearings from oak forests which yield a rich black mould. Most of this land was placed in the first class at the survey on account of the value of the crop, and therefore for practical purposes *katil* is restricted to occasional clearings for mandua. It thus appears that natural soil classifications are unknown, and the people themselves do not discriminate between soils on the basis of their composition, as in the plains. All land has to be terraced, and when this has been done, the soil is generally uniform in its productive capacity. At the time of the settlement the total classified area amounted to 48,925 *bhis*, of which 3,234 *bhis* were irrigated and 4,051 *bhis* classed as *katil*, the whole of the remainder being *uparaon* of the first and second classes.

With regard to hill cultivation generally, reference may be made to Mr. Goudge's assessment report of 1902. He remarks that the people prefer the facilities of the Bhabar even to the most favoured tracts in the hills, and that they attempt to cultivate simultaneously both in the lowlands and in the hills, with the result that the less productive and more arduous tillage of the latter has to suffer. "At last settlement the total measured area was 36,291 *bhis*, of which 6,080 *bhis*, or 16.75 per cent., were *laiqabad*, i.e. in modern terms fallow and unassessable. Comparing this with pargana Shor in Almora, where the people live entirely in the hills, we find that the percentage of unassessable to the total measured area was only 13.6 per cent. At the present survey, excluding the exceptional potato mahals of Binaik-dhura, Hartola, and Managhir, we find the proportion of old fallow to the total measured area is as high as 23 per cent., which can only mean neglect. There ought in fact to be very little unassessable area in a hill village. All terraced cultivation is permanent and requires little or no rest, and the bulk of the measured fields are of this class." This neglect is simply

due to the annual migration to the Bhabar in the winter. The land in the hills is indeed frequently cultivated for the rabi harvest, but little manure is given to the soil and weeding is neglected. The harvest takes place with the return from the Bhabar. The time of reaping the crops and their outturn vary of course according to elevation. In the *seras* of the Kosi or the Gola wheat is being reaped in the middle of April, while in the heights of Dhyaniarau it is only yellowing at the end of May. Generally, it must be said that the cultivation of the district only attains a low standard, while it is no less a fact that in some few pattis the class of crops and the care bestowed on irrigation, manuring and terracing of fields are worthy of the best of Indian cultivators.

In the Bhabar cultivation is broken and scattered and is almost entirely dependent on the net-work of small canals^t that have been drawn from the hill streams and lakes. The cultivated area consists for the most part of compact blocks at the mouth of each valley; the rivers, as they leave the hills, are diverted into masonry canals, and the cultivation runs along these with their various bifurcations and branches. The *gul* or watercourse runs as a rule down the centre of a village, and on either side are the fields which are generally of a larger size than in the southern districts; they are all parallel and straight, suited to the requirement of irrigation. The well-being of the Bhābar is primarily dependent on the canals, for without these, owing to the nature of the subsoil, there would be no cultivation. They also supply drinking water as there are no wells and the rivers are far from cultivation. Next to the canals the prosperity of the cultivation depends on the district forests, for it is here that cattle find pasturage and the people supply themselves with wood for their agricultural implements, fencing, hutting, &c. Manure is obtained from large herds, which are kept on the village lands as long as possible and then on the outskirts of the village, so long as fodder is obtainable, after which they are driven down for the dry weather to the Tarai swamps where grass abounds. Before the lahi (rape) ploughings in August they even pay to get up herds of cattle from the pasture grounds between the Bhabar and

Tarai and tether the animals on the fields, so as to secure good manure before breaking up the soil for sowing. Crops follow the following rotation. Rice leads off, with the commencement of the rains, and covers usually half the area of a village. Cattle are then brought up from the Tarai border land and tethered in the vacant half of the village area, which is thus manured for the rabi crop ploughing which begins in September. On this vacant half lahi is sown, and when the rice is harvested in November, that area is resown with wheat. The rape crop being gathered in February, half the area is resown with ganára, which is cut immediately after the wheat in May. The paying crop is lahi, and it is from this that the revenue demand is met, ganára and the coarser kinds of rice being kept for home consumption. The wheat is excellent, as also the valuable *hansraj* class of rice. Sugarcane is not attempted to any great extent.* The average area cultivated in the Bhabar for the five years ending 1903 is 56,280 acres, of which 2,210 acres are in Bhabar-Chhakata, 17,110 in Chilkia, 14,509 in Kotah, and only 2,160 acres in Chaubhainsi, which has always been the least developed portion of the tract. In most parts of the Bhabar much trouble is incurred in protecting the crops from the ravages of wild animals and even more so of the uncontrolled herds of domestic cattle, so that the hedging of the fields is of great importance. Hedges are made for the whole village from the wild rose trees which grow freely and make a thick impenetrable fence. All villagers have to co-operate in making this outer fence, but the cross-hedges are made by each cultivator for his own land. The latter are usually temporary and are made of thorns and forest scrub.

In the Tarai parganas and Kashipur cultivation somewhat resembles that of the plains district, but is of a ruder character. The soil is naturally fertile, and owing to its inherent capabilities the outturn is so satisfactory that manure is seldom thought of or required. Consequently good crops can be raised with very inferior cultivation, and this fact combined with low rents, is the chief attraction to an immigrant. Irrigation is almost everywhere, however, essential; for the Tarai is a mainly

* See Mr. Hollingbery's Report on the Bhabar Settlement 1894, p. 2

rice-producing area and in former years was almost entirely so. Nowadays, and especially in dry seasons, a good deal of land is cultivated for the spring harvest and also for other autumn crops than rice. This depends on the commencement of the rains; when the monsoon breaks late more rabi is sown, and *vice versa* with the kharif. The Tharus and Bhukasas still look to rice as their staple crop. The best soils and climate are those of pargana Bazpur. Generally speaking, the surface soil of the upper cultivated portions of the Tarai is a light sandy loam which becomes exhausted by continual tillage, and this fact accounts for the constant shifting of cultivation to different parts of the village area in order to allow for a sufficient period of fallow. Further south, however, the soil contains more alum and less silica, and lower down a stiff clay is found, which is continuously cultivated without showing any signs of exhaustion. Clay occurs everywhere in the depressions, while as usual the soil becomes lighter on the higher ground between the lines of drainage. In the west it is a fairly dark consistent loam, but to the east in pargana Bilheri there is a light friable soil, which rather resembles that of the northern parts of Pilibhit and Bareilly. The average area cultivated in the Tarai is about 110,000 acres, and of this some 57,000 acres bear a double crop. The kharif is everywhere the more important harvest, exceeding the rabi by over 20 per cent., but in some parganas the double-cropped area is very large. In Kilpuri, at the time of Mr. Hutton's report on irrigation in 1900, it amounted to no less than 75 per cent., while in both Bilheri and Gadarpur it was over 60 per cent., the lowest proportion being 32 per cent. in Rudarpur. This high figure is very remarkable in a great rice-growing tract like Gadarpur, where this crop occupies 85 per cent. of the area sown in the kharif.

In the hill pattis the kharif is the only harvest of any importance on account of the annual migration to the Bhabar during the cold weather. There is no detailed crop statement for this part of the district, and consequently it is impossible to give the areas occupied by the different staples. Of the food-grains the most important is rice, innumerable varieties of which are cultivated, followed by mandua as has been already stated.

This mandua is varied by different kinds of pulses and the smaller millets. The other hill crops, such as potatoes, vegetables and tea, will be separately mentioned, as also the other special crops, such as hemp, turmeric and ginger. In the Bhabar, on the other hand, the rabi is by far the most important harvest. The crop statements are in this case available and will be found in the appendix. Wheat takes the lead in all parts of the Bhabar, while the other food crops cultivated to any extent are barley, masur, gram and vegetables. One of the most important and valuable crops grown in the Bhabar is lahi or rape, which covers some 20,000 acres annually. The land is prepared for this crop in August and it is cut in February; it requires a good deal of manure, but the profits realized are large. The whole of this rape is exported from the Bhabar by rail. Another crop of some importance in the Bhabar is tobacco, large quantities of which are exported to the plains. The quality of the leaf is not so delicate as that of the better sorts of the plains varieties, but the quantity produced from a given area is greatly in excess of that obtained elsewhere. The kharif harvest in the Bhabar is of most importance in the Haldwani Circle and in Chilikia. Rice forms the main staple and, indeed, with the exception of mandua and urd, is the only crop worth mentioning. A fair amount of maize is grown in Chilikia and at one time sugarcane was somewhat extensively cultivated, although at present it has almost disappeared. In 1901 rice covered nearly 88 per cent. of the whole area sown in the kharif and shows a distinct increase since Mr. Roberts' settlement, the probable reason being the increase in the commercial value. For the Tarai parganas the crop statements are given in the appendix.* Rice is by far the most important crop in every pargana. The outturn is largely dependent on the quantity of water it receives; in good soil and with water always available it has reached as much as 4,625 lbs. to the acre. The average for the whole Tarai of course was far below this, although in favourable years with abundant rain and irrigation it has been known to rise above 3,000 lbs. for the whole area. When the crop is not weeded, a greater quantity of water is required,

* Appendix. Table V

and for this reason the Tharus in Bilheri and Nanakmata do not need so much water as the other cultivators, who do but little weeding. Stagnant water is bad for the crop since it encourages the growth of weeds. The best results are obtained where a shallow sheet of water flows slowly and continuously over the crop, especially where the water brings with it fertilizing matter. In the Tharu country, owing to their different systems of cultivation, the greater rainfall and the nature of the soil, excellent crops of rice are grown, irrigated only from the rainfall and the drainage of the country. The careless cultivation of the immigrant villagers from the plains and the many facilities for the waste of water are largely responsible for the low duty of water used for rice cultivation throughout the Tarai. Besides rice, maize is very largely grown in all parts of the Tarai, and especially in Bazpur and Rudarpur. In these two parganas also we find considerable areas under juar. Sugarcane is grown in most parts, but not to a very great extent, the largest areas being in Rudarpur and Nanakmata. In the kharif, wheat everywhere takes the lead, but is closely followed by gram and especially in Rudarpur. The other important crops are barley and lahi, the latter covering nearly 8,300 acres in 1902; the largest area is in Bazpur, where it amounted to 4,054 acres. The Kashipur pargana generally resembles the Tarai, save that in the kharif more sugarcane is grown, and a much larger proportion of wheat in the rabi.

The idea of cultivating tea in the hill districts of northern India was first originated by Dr. Royle, who was in charge of the Company's garden at Saharanpur in 1827. In that year he pointed out the resemblance of the Himálayan vegetation with that of the tea-producing districts of China, as well as the suitability of the soil, especially in Kumaun. This opinion, which he again expressed four years later to Lord William Bentinck and those of other scientists, led to the formation of the Tea Committee in 1834. This body, after conducting a careful investigation into the subject, recommended the establishment of a garden at Bhim Tal in this district, as well as at other places in Almora and Dohra Dán. Mr. Traill, the Commissioner of Kumaun was requested to lend his aid to the project, and he

with the assistance of Mr. R. Blinkworth, selected a plot of four acres for a nursery at Bhartpur near Bhim Tal. The discovery of the true tea plant growing wild in Assam naturally gave rise to a considerable amount of partiality in favour of restricting cultivation to that country: and consequently attention was diverted from the more distant nurseries of Kumaun. The latter, however, were in good hands, and in spite of all drawbacks the success of the experiment soon became evident. In 1841 there were 1,344 plants at the Bhartpur nursery, of which 291 were originally introduced in 1835, and the remainder were seedlings or layers of these. As yet, however, little was known in India regarding the actual manufacture of tea, and consequently Chinamen had to be imported in 1842. They made a small amount of tea that year, and samples were submitted to London for expert opinion, which was on the whole very favourable. In 1844 Dr. Jameson succeeded to the charge of the Saharanpur garden, and did much towards promoting the cultivation of tea in Kumaun, and during his administration the enterprise passed from the experimental stage to the period when its profitable cultivation justified the Government in handing it over to private enterprise. The Bhartpur nursery was still under Government management in 1851, as also were the branch gardens at Ann and Knasar, comprising 46 acres, and Rasiya of 75 acres, all in the neighbourhood of Bhim Tal. This state of things continued till 1864, when Dr. Jameson recommended that the gardens should be handed over to private capitalists. This was subsequently done, and the tea gardens were taken up and for some time formed profitable speculations; but of late years they have greatly declined in importance. There are now five tea estates in the district, two at Bhowali owned by Mr. Newton and Mr. Mullins, one at Bhim Tal belonging to Mr. Jones, Mr. Deriaz' garden at Ramgarh, and that of General Wheeler at Ghorakhal. The planters have found it more profitable to turn their attention to fruit-growing, and but little tea is now manufactured. It is only grown to any appreciable extent at Ramgarh and Bhim Tal. The former garden was acquired by purchase at a public auction in 1893, but has been in existence since 1856. The average outturn from this garden from 1893 to 1903 was

nearly 2,800 lbs. annually from 30 acres; but for the last three years the average has fallen to 783 lbs. from 21 acres, whereas in 1894 the output was no less than 9,000 lbs. Bhim Tal has had on an average 100 acres under tea, and the outturn has been about 2,500 lbs. yearly. This has, however, been fully maintained, for in 1902 over 2,800 lbs. were manufactured. Altogether, not more than 60 persons are permanently employed in the cultivation of tea.

There is very little cultivation of the hemp plant in this district. The collection of the spontaneous growth of hemp is permitted by Government, but there is very little done in the way of manufacturing *charas* or other intoxicating drugs. At one time an attempt was made to encourage the cultivation of the male hemp in Kumaun, but this languished with the abolition of the East India Company's trade, and now it is only cultivated for fibre to any extent in Garhwal, where hemp cloth is the chief clothing fabric of the poorer classes during the summer months. A few *bisis* are still sown with hemp in the patti of Malli Rau in Dhyani-*raun*, and there its cultivation is generally left to Doms, who weave hempen sackcloth from it, although the sale of the untwisted fibre is generally more common than that of the manufactured stuff. The latter is usually made up into bags for potatoes, and a considerable trade in them is carried on at Ramnagar.

Besides the ordinary food grains and other crops, a large amount of land is devoted to the cultivation of vegetables both in the hills and the Bhabar. These fall into three main classes, of which the first comprise those vegetables, such as turmeric and chillies, which are grown for export, the second vegetables for the Naini Tal and other markets, and the last vegetables which are grown for home consumption and which form so important a part of the hillman's dietary.

Under the first head the most important and by far the most widely cultivated is the potato. This is confined to the hill patts, where it occupies the foremost place among the agricultural products. The history of potato cultivation will be found in Chapter IV, where it is dealt with in the account of the assessment of the ull patts. Potatoes are not large y grown

in the old measured fields, except in the immediate neighbourhood of Naini Tal itself, but are generally confined to the extensive clearings made of late years in the oak forest, such as Gunilekh, Jilang and portions of Sarna in Mahruri Tal, the six Government mahals on the Binaik-dhura ridge in the Kotah and Dhaniyakot parganas, Managhir in Dhyanirau and Hartola in Ramgarh Tal. The tenures of the potato fields and some account of the trade in this vegetable will also be dealt with elsewhere. The development of potato cultivation is one of the most important features in the recent economic history of the district and has had a very marked effect on the prosperity of the tract.

ie, Other special crops of this nature include turmeric, ginger, chillies and a few others. In old times pargana Chhakhata had a great name for ginger and turmeric, but at present only a small area is devoted to the cultivation of these roots. Mr. Goudge writes that "the reason alleged is that *sāl* leaves (used to spread over the seedlings, partly for warmth, partly for manure, and partly to keep down weeds) are not now procurable owing to the reservation of the forests. This may have something to do with the decline in the growth of these valuable crops, but I think that the propinquity of the Bhabar and the ease with which they can cultivate there, have been the more potent factors in its explanation."* In former days turmeric or *halah* was one of the most important and profitable of exports from the lower hills, and it is also cultivated in the Duns and Bhabar. It is still grown in many of the hot valleys of the hills and in the *seras* along the rivers, but not to the extent we find in Kali Kumaun. Ginger is also a product of the hot valleys; it needs careful cultivation and abundant manure, but the profits realized are considerable. Chillies, or red pepper, are only cultivated in certain parts of the district in villages of low elevation on the outer ridges or in the river valleys, and are practically confined to Chhabbis Dumola, Changarh and Bisjyula of pargana Dhyanirau, Chhakhata and the pattis along the Kosi. The crop is a very valuable one, and the export trade, most of which passes through Ramnagar, is of great importance, although Naini Tal cannot

compare in this respect with the adjoining district of Garhwal. Arrowroot has been successfully cultivated as an experiment at Haldwani, but it has yet to obtain popularity with the country people.

Under the second head we have almost every vegetable grown in Europe as well as many others that are natives of India. It is quite unnecessary to give a detailed list, for almost all the products of English vegetable gardens grow readily in the hills. Their cultivation has been largely taken up by the hill people, especially in the vicinity of Naini Tal, where market gardening is a business that yearly increases in importance. The vegetables are not merely sold in the hill stations, but large quantities are exported by rail to the plains during the hot weather.

Lastly, there are those vegetables which are grown by the people for their own consumption. These include many which also belong to the second category. Thus turnips have now begun to form a regular article of food and are grown in many parts of the district, in spite of the prejudice maintained by the Brahmans and Banias against them, as in some manner resembling flesh. Others are the radish, cabbage, *bhindi*, beans of various kinds, and carrots, which are universally grown both for sale and home consumption. The onion, too, is commonly cultivated and eaten by all classes, the hill people having no objection to it as is the case with the higher castes in the plains. The sweet potato is largely cultivated in the hills and Bhabar, and so is the yam known as *chupri alu*. The egg-plant or *baigan* is another common vegetable. There are some twenty species of gourd cultivated or growing wild in the district, although several of them are merely used for medicinal purposes. Besides these there are great numbers of vegetables grown for spices and condiments.

Reference has already been made to the method and extent of irrigation practised in the hill patts of the district. The figures of 1901, the year of settlement, show that the total irrigated land was 3,234 *bhis*, or less than seven per cent. of the total assessed area. It must be remembered that there is very little *rabi* cultivation in the hills and consequently irrigation is

only required for the more valuable crops of the *lharif*, and its necessity is the less urgent by reason of the heavy rainfall of the outer ranges of the Himalayas.

So early as the year 1818 the attention of the Board of Revenue was directed to the irrigation of the Bhabar, and in that year they forwarded to Mr. Traill a report by Lieutenant Fordyce on the construction of watercourses, detailing his experience in excavating one on the road between Bhamauri below Bhim Tal and Tanda in the Tarai. Mr. Traill had already considered the subject, but had found so many obstacles to the introduction of any extensive system of irrigation that he considered it premature to make any proposals on the subject. The difficulty in procuring tenants and the unhealthy nature of the climate, combined with the uncertainty of the right of the hillmen to draw off the water for their cultivation at the foot of the hills, deterred the landholders from entering into the cultivation of the Bhabar, although land of good quality was available everywhere. Physical obstacles also precluded individuals from attempting any system of irrigation. The soil of the Bhabar is gravel and shingle, lying at a slope of two or three feet in a hundred at the foot of the hills, and decreasing to three or four inches in a hundred feet at the point where the Tarai swamps are reached. The mountain streams almost always sink below the surface of the ground on reaching the base of the hills, and the greater rivers which keep to the surface are all of a torrential nature, having a very high slope when they debouch from the hills, and liable in the rains to violent floods which bring down vast quantities of boulders and shingle.

In Mr. Batten's time, from 1848 to 1856, the only irrigation in the eastern Bhabar was that around Chorgallia, where the waters of Nandhaur were utilized by means of channels made by the hillmen. The country to the east of the Nandhaur is still covered with *sál* forests and large grassy plains, and is intersected with numerous torrents and ravines which, except for a few pools, are practically dry soon after the rains are over. Owing to the absence of water and the bad climate, it is but slightly cultivated and irrigation is hardly needed; moreover, as was mentioned in the preceding chapter, the spring level is here remarkably

high. In Chhakhata, however, on the other side of the Gola, there was as early as 1846 "a beautiful line of clearings irrigated by their several guls from that river, and in the spring season a rich sheet of rape and wheat cultivation reaching to about six miles from the hills on both banks, a small belt of jungle, however, remaining in the immediate vicinity of the river bed."* In this case, too, the only irrigation channels were those made by the cultivators. Mr. Batten remarked that as nearly all the rivers of the Bhabar run practically dry in the lower portion of their course before they swell again in the swamps of the Tarai, there could be no danger of damaging the Tarai villages by taking out water from them in the upper portions of their course to irrigate the Bhabar. In 1850 Captain Ramsay was placed in charge of the Bhabar and expended all the surplus income in constructing canals—a measure which had the most beneficial results.

Beginning from the east, the main sources of irrigation are the Nandhaur river which irrigates the Chorgallia Circle; to the west of this at a distance of about twelve miles there is the Gola, which supplies the needs of 28,000 acres. Further west again are the Baur and the Dabka irrigating the Kotah Dún; and lastly, the Kosi, which supplies the Ramnagar, Chilkia and Jaseganja canals, irrigating an area on both banks of about 20,000 acres. The actual distribution of supply is made to each village through its channels; these are managed by the *sirgiroh* or headman under the direction of the Superintendent and not of the Engineer, the reason being that the former is better acquainted with the wants of the people and more constantly in touch with them. The irrigating capacity of the canal varies according to the extent to which they have been lined with masonry, and also in the case of various soils we find very different results. In the Kotah Dún the returns are the most satisfactory, but it must be remembered that here the cultivation is more careful than in the rest of the Bhabar; the population of this tract is comparatively settled and not migratory to the hills for half a year, while the soil is of a less absorbent nature. Generally speaking, there is a wasteful and

lavish expenditure of water by the inferior class of cultivators who till this tract, but the chief cause of the low duty obtained is the thirsty nature of the soil, although there is undoubtedly much room for improvement in the way of economy. Owing to the excessive percolation it is most important that all canals should be lined with masonry, and year by year more is done in this direction with the most beneficial results. The revenue assumed to be derived from the benefits of irrigation has always been calculated at 75 per cent. of the actual cash rents derived from the cultivated land in the Bhabar. The average annual water-rate calculated from the returns of the ten years ending 1902 amounts to about Rs. 1,30,700. There has been a considerable decline in recent years owing to bad seasons, and also perhaps to the increase of the profitable potato cultivation in the hills. The average annual expenditure on works and repairs for the same period amounts to Rs. 46,000. This figure depends largely on the character of the monsoon, a heavy rainfall, particularly at the end of the season, invariably resulting in a heavy bill for repairs during the following cold weather. During the monsoon large gangs of coolies have to be maintained for the upkeep of the dams at the head of all canals—a matter of great difficulty when floods are frequent.

A brief description may now be given of the more important canals. The Chorgallia canal starts from the Naulhaur close to its exit from the hills and in its present form was constructed in 1887-89 at a cost of Rs. 20,000. In order to shorten its length, it has been cut too much into the hillside, with the result that slips are numerous, entailing a good deal of subsequent arching. The main channel runs parallel to the Sitarganj road, while a western branch takes off just above the upper mill, leading to the few detached villages along the road to Haldwani. The total length of canal is about ten miles, half of which is composed of a masonry channel. It irrigates a block of cultivation comprising about 3,000 acres on the west bank of the river.

11. The Golapar canal irrigates the tract of country between the east bank of the Gola and the Sukhi. The headwork is situated just below the Kathgodam suspension bridge. The great rains

of 1880 scored out the bed of the Gola for several feet, so as to render it very difficult to carry the water into the canals, but substantial weirs were built to avoid this difficulty in future. In spite of this, the landslip at Jeolikot in 1898 blocked up the lower reaches of the Gola with large quantities of gravel, much of which was swept into the canals and caused great trouble. The unprecedented flood of September in the same year carried away the whole headworks and a considerable length of the canal as well. A short distance below the head, the canal passes under the large Sultannagri landslip, which began in 1880 and has yearly increased in extent, involving a continual addition to the arching over the canal. This arching extends for some 2,500 feet and the canal lies buried at a depth of over forty feet at the deepest place. The whole of this canal is built of masonry: it has a total length of 26 miles and irrigates about 200 acres to the mile.

West of the Gola there is the Golawar canal, the largest and most important in the Bhabar. It starts about a quarter of a mile above the Kathgodam bridge and runs for a total length of 56 miles, of which almost the whole is composed of masonry channels. It irrigates the country as far west as the Bhakra and commands a culturable area of 20,000 acres. The Kaladhungi canal has a total length of eight miles, the whole running in a masonry channel. It irrigates the tract of country east of the Baur, the bulk of the cultivation lying south of the submontane road. The headworks are situated on the left bank of the Baur, a short distance above the Kaladhungi bungalow; thence the canal is carried on a massive retaining wall under the high bank of the river and thus reaches the lower country. The supply of water for the Golapar and Golawar canals is supplemented from the Bhim Tal and Sat Tal lakes, which were artificially dammed by Sir Henry Ramsay, as mentioned in the separate articles on those lakes. The same officer made an embankment at Malwa Tal, but the dam failed and has not been since rebuilt.

The Ramnagar canal has a total length of 28 miles and for most of the distance runs in a masonry channel. It is supplied from the Kosi and owing to the vagaries of that peculiar river,

this canal has suffered more to the detriment than any other. The floods of 1880, 1890, 1891 and 1897, destroyed or seriously damaged large portions of the canal near the headworks, which had to be reconstructed on a lower level. It is intended as soon as possible to link up this canal with the Kashipur system. There is always a demand for water in Kashipur for the sugarcane crop, at a time when irrigation is little needed in the Bhabar; in the case of a long break in the monsoon, the extension would prove of the greatest value. The Chilkia canal runs parallel to the old Kashipur and Moradabad road, and is connected with the Ramnagar canal by means of the Narainpur branch. It has a total length of thirteen miles of masonry channel and commands 320 acres to the mile. Another branch of the same system is the Jassaganja, an old canal which was reconstructed in 1895. It is only two miles in length, but further extensions are contemplated. Besides these, there is a large number of other canals in the Bhabar, all of which do good work, and are of the greatest value to the country. Altogether, they have a combined length of some 70 miles. They comprise the Fatchpur and Chamsila canals, which are taken out of small streams and irrigate the villages of those names in the west of the Haldwani circle; the Nayagaon canal, which also waters one village in the Kamola-Dhamola Circle; the Dechauri canal in the Kotah Dún, built by the Kumaon Iron Works Company and now used for irrigation in the prosperous villages of the Dún; and the Kotah canal, which irrigates the western half of the Kotah Dún and is supplied from the Dabka. Further, there are the small Kamola and Dhamola canals taken out of the Karrar, and irrigating the villages below the Dún: further west is the Pawalgarh, which takes out of the Dabka just above the road from Ramnagar to Kotah; the Kicheri canal, from the stream of the same name, which originates above the Ramnagar-Kotah road and is carried down to the lowland villages; the Barail and Dabka canals, which take out of the east and west banks of the Dabka; the small Dhikuli canal in the Patkot Dún; and the Suwaldeh, Dhela and Phika canals beyond the Kosi. Altogether, according to Mr. C. H. Hutton's report of 1898, there are 201 miles of canal in the Bhabar of w 101

run in a masonry channel: they command a total area of 70,327 acres, of which 53,978 acres were then cultivated. The great bulk of the irrigation is carried on in the rabi harvest, which accounts for some 50,000 acres as against 22,000 acres watered in the kharif.

In the Tarai the streams have been used from the earliest times for irrigation. The simplest and most common procedure¹ was to construct dams where required across the streams, but the results in the end were ruinous both to the land and to the climate. The soil became waterlogged and gave rise to a severe form of malarious fever which carried away the majority of the inhabitants. The streams being diverted formed immense swamps and swallowed up the arable land. Mr. Fleetwood Williams endeavoured to remedy this evil, and was succeeded by Captains Jones in 1844. He effected much, but the work was interrupted by the mutiny, and it was not until 1861 that the present system of canals was taken in hand and attention was seriously given to the reclamation of the swamps. So far as the latter were concerned, Captain Jones' work was very successful, but all the dams and canal heads built by him have failed except the headworks of the Kichha canal. This result was due to inexperience in dealing with streams of so peculiar a character, and also in a great degree to the want of proper supervision, from which works on such streams, which require constant care and attention on the part of those in charge, at that time undoubtedly suffered. Mr. J. C. Macdonald, who was Superintendent from 1871 to 1890, with the assistance of the Executive Engineer of the Rohilkhand canals, did some excellent work in instituting a series of canals in Kashipur and Gadarpur, and started the work of constructing the Katna canal in Kilpuri in 1889. Shortly after his death, a rapid decline took place in rents in the Tarai pargana, partly due to bad seasons and to increasing difficulties in irrigating from the earthen dams resulting from natural causes, and partly to other reasons connected with the management. In 1891, therefore, as matters were rapidly going from bad to worse, the services of an officer of the Irrigation Department were lent to the Tarai and Bhabar Estates who while especially appointed to look after

and improve the irrigation system, also had charge of the roads and other public works. The country is of a most intricate nature, a perfect net-work of streams and water channels, and it consequently took some time to gain sufficient experience before any real progress could be made or any comprehensive scheme could be adopted for the development of irrigation. Cultivation in the Tarai is to a very great extent dependent on irrigation, and therefore the work of the Executive Engineer is of the highest importance. He is continually hampered by the climate—an obstacle which makes it a task of extreme difficulty to maintain a sufficient and efficient staff. It has never been easy to get good men for the Tarai, and it is still more difficult matter to get work done owing to the scarcity of labour, sickness among the staff and the fact that the working season is only of six months' duration.

Under existing arrangements the Irrigation Branch of the Public Works Department has charge over all the waters between the Kailas on the east and the Baror on the west, including pargana Kashipur and half of Rudarpur, with the exception of the Katna, the canal from which is the direct charge of the Tarai Estate. The canals in this portion are the Bahgul and the Pahaj, which do their work partly in the Tarai and partly in the Bareilly district. In the Bilheri and Nanakmata parganas, the irrigation, with the exception of the Lohiya canal in the former, is carried out entirely by the villagers themselves: they construct their own earthen dams and guls and, so long as they do not cause swamps by their works, they are left to their own devices. When, however, as occasionally must happen with streams of such rapid gradients, the bed is lowered too much for them to be able any longer to maintain their earthen dams, the estate authorities are sometimes enabled to help them by constructing masonry weirs, as has happened on the Lohiya and Bahadra rivers. With regard to the portion of the Tarai between the Baror and the Kosi and the tract between the east Bahgul and the Katna, the system is somewhat similar, except that the dams are constructed by the Estates and not by the villagers. Here the old earthen dams have been mostly replaced by solid structures of masonry on the smaller streams

while the larger rivers, such as the Baur, Ghuga and Kosi, are hardly utilized at all, inasmuch as large and expensive works would be necessary on them, while there is an ample supply from all the smaller streams with their perennial flow of water. Formerly the canals from these streams were generally a series of small guls taken directly from the stream at various points or from diversions of these streams; but as this system involved a number of dams which block the drainage of the country, they are gradually being formed into regular canals taken out at one point only and then running on the watershed, with sometimes a second head lower down the canal to supplement the flow with the aid of springs rising below the main head. In this manner there will be little or no interference with the drainage, and though it is impossible to hope for a great advance in this direction, yet in this way something may be effected towards the improvement of the climate: at any rate there is the great advantage of having the water far more completely under control than was the case with the old system. Constant watch has to be kept on the head-waters of the streams irrigating the lower portions of the Tarai in order to see that the Bhuksas do not take too much of the water needed below. These Bhuksas live in the most unhealthy parts of the country along the line of springs and, if allowed, are most wasteful of the water, taking generally about five times as much as they really need. The whole of the guls which irrigate the *kham* villages in the Tarai are cleared by and at the cost of the estate. The annual cost, inclusive of new guls, is from Rs. 8,000 to Rs. 9,000. The greater part of this work is carried out through the agency of the tahsils under the direction of the executive Engineer, as it has been considered that in this way the work can be carried out with more expedition and with the advantage of greater local knowledge than by the sub-overseers, who have plenty of other work to do.

In considering the various irrigation systems of the Tarai Estate, it is advisable to take each pargana separately. In Bazpur, the westernmost subdivision, the chief irrigation works are the Bazpur and Narainpur canals whose source of supply is the Pathri. These together have a total length of fourteen

miles and command a cultivated area of some 5,500 acres. The Khelukhera canal from the Gandli has a length of nine miles four furlongs. The villages irrigated by this canal were originally supplied from the Bangaria, an artificial branch of the Gandli. The earthen dams were put in where required, but these were continually breaking down, cutting up the land into ravines, and in consequence it was determined to make a single dam on the Gandli and to carry the water along the deep artificial channel starting from the village of Narkhera. It commands an area of some 1,300 acres. The Rampura and Ratanpura canals from the Jogipura stream also water a considerable area and have a total length of seven miles; the same river, which is also known as the Ghugi, supplies water to the small Sarkara and Kunaori canals. Besides these, there are several other small channels in this pargana taken out of the Lebdua, Kukrenda and Sandla, with a total length of some 33 miles.

Pargana Gadarpur is irrigated by a regular system of canals taken from four main sources of supply. The Jemar canal is fed with the combined waters of the Jemar and Kakrala, and irrigates the tract of country between the present course of the Baur and the old channel of that river and the Nihal. The western branch of the canal, known as the Ramsagar, is the old Baur canal made by Captain Jones in 1854, the dam of which was broken down by floods. The Kajjia canal is taken from the river of that name, a short distance above its junction with the Bhakra, and irrigates the tract of country between the Nihal and the village of Bhainsia, and was made by Mr. Macdonald; it has a total length of seventeen miles including its four branches, and supplies water to nine villages. The Bhakra canal waters the country between that river and the Saijni. This canal has had a very chequered history. Captain Jones built a masonry weir on the river in 1855; but this failed altogether, as also did the subsequent attempt to restore it in 1885. Another canal was begun in 1890, but the work was destroyed by the extensive flood in September of the same year. After another unsuccessful attempt in 1892, a new head-work was made by Mr. Hutton at a

point some distance below Captain Jones' weir. The fourth canal is the Chandanpura, which is taken out of the Gandli and irrigates three villages, a fine tract of country on the west side of the present Baur. In addition to these, two small streams, known as the Kakarson and Andhua, have been canalized, and irrigate the country between the Bhakra on the west and the Dimri on the east. Altogether there are 78 miles of canal in this pargana, irrigating 15,000 acres.

In pargana Rudarpur, the portion between the Dimri and the Baror is intersected by numerous small streams which have a fair supply at all times, and consequently the tract is irrigated by a network of little channels, none of which command a large area. The most important canals are those from the Dimri, Baghaiya, Madni and Naubaha rivers. The first of these supplies three channels with a total combined length of nearly eleven miles, and irrigating nine villages. The Baghaiya supplies water for two canals, the Kaneta and Rudarpur, the two being about fifteen miles in length: these with their branch channels irrigate nine villages with a culturable area of some 5,000 acres. The Madni canal waters the tract of country south of the road between the Madni and Baror rivers. There are four main streams from this canal, which supplies ten villages in all. The Naubaha is made to supply three channels, of which the Partabpur is the most important. The others are the Lalpur and Maharajpur canals. The total length is something over fourteen miles, commanding some 13,000 acres of culturable land. Besides these, there are three other minor canals, taken from the western Bahgul, the Baror and Barai, the last being known as the Samandpur canal.

In pargana Kilpuri the only irrigation work of any importance is the Katna canal, which has a length of 24 miles and irrigates some 2,500 acres in the kharif: it is fed from the Katna river, which rises in the Bhabar and drains the uplands lying between the Sukhi on the east and a branch of the Gola on the west. In 1888 a masonry weir was built on the river just above the pargana boundary and a canal was dug from the new head to feed the old channel. A short distance below the masonry weir the Katna is joined by the Gola the combined

rivers being called the Katna; but some distance below it unites with the Dhora, which gives its name to the whole. The old outlet of the original Katna is completely silted up: earthen dams have been constructed on it in several places, and they have become permanent; the irrigation watercourses are deep and wide, so that the whole supply of the river is poured over the country at all seasons. Steps are being taken to remedy this evil, and a good deal has already been done; but the country is very difficult and intricate, being covered with dense grass jungle for the greater part of the cold weather. Any measure with this object in view would undoubtedly render the country less unhealthy. There are no regular canals in pargana Nanakmata, almost the whole of which consists of settled villages. Irrigation is practised to a very small extent, as the local streams run in small and deep channels with very little spring water in them.

In pargana Bilheri irrigation is chiefly carried on by the Tharu cultivators themselves, who collect the drainage water flowing off the surface of the country, keeping it in the fields by low mud ridges, and allowing it to pass down gradually in succession from one field to another. There is only one regular canal, known as the Lohiya, which has a length of thirteen miles and irrigates nearly 4,000 acres. Its headquarters are situated some four miles south of Khatima in the village of Tehra-ghat. It waters some ten villages and commands about 5,800 acres. It is now proposed to dig a channel from the Bahadra, which will provide water for a block of twelve villages in the west of the pargana.

The report on the Tarai canals by Mr. C. H. Hutton (1901), gives a very full and clear account of the whole irrigation system and has further the advantages of being fully illustrated. In connection with these canals it must be remembered that elaborate engineering work is out of question; so much damage is liable to be done by the floods, and those accidents cannot be repaired at the time of occurrence owing to the deadly climate.

It remains to consider the canal systems of Kashipur. Irrigation was probably practised in this pargana for many

years previous to the British occupation by means of dams and obstructions across the numerous streams. Originally it formed, with Jaspur, part of the Moradabad district, and the management and collection of the water-rate were under the Collector of that district. In 1870 the parganas were transferred to the control of the Superintendent of the Tarai, who collected water rates and repaired the dams and channels. The accounts, too, were kept by him and he had entire control of all the revenues under this head, the whole of which has been expended on improvements connected with irrigation. In 1872 Mr. Macdonald was given a free hand to improve the irrigation and drainage system of the pargana. At the time of his death in 1890 most of the irrigation from obstructed streams was done away with, and in its place there was a system of canals running on the watershed. He had effected great improvements in the canal system of this pargana, but of late years the results have not been so satisfactory, and this has to some extent contributed to the deterioration of the pargana. Jaspur is bounded on the west by the Pili river and separated from Kashipur by the Tumana nadi. Between these streams are the Phika, Lumphana and the heads of the Dandi river; from these no irrigation is carried on, and they have, with the exception of the Lumphana, no discharge in the cold weather. It is probably true that the system of irrigation from obstructed streams as usually practised in the Tarai is responsible for a good deal of its unhealthiness. It is equally probable that without irrigation (excluding the part occupied by the Tharus and Bhuksas) the greater part of the Tarai could not be cultivated. The chief reasons why cultivators are attracted to the Tarai to brave the notorious unhealthiness of its climate are, that they are lightly assessed and that they are able to make an enormous profit out of the cultivation of rice. The outturn of a crop of rice is largely dependent on the quantity of water it receives, and without irrigation the villagers from the plains will not attempt its cultivation. In the Kashipur pargana the canals are worked by the Estates authorities in a similar manner to that of the Irrigation Department, whereas for the rest of the Tarai canals under the charge of the Estates the distribution

is directly in the hands of the Revenue-officials and there are no separate water-rates, these being, as in the Bhabar, included in the land-revenue.

The chief canals of the pargana are four in number. The Kilaoli or Upper Dhela canal is fed from two earthen dams; one on the Tumaria and the other in Dhela; owing to the lowering of the bed of the Dhela, however, the water of the former is now alone used. This canal brings in a revenue of about Rs. 300 annually, which is all expended on its upkeep; it is simply kept in order for the benefit of the directly-managed villages irrigated therefrom. The Dona Sagar canal has a length of 27 miles, with its branches, and is supplied by two feeders from the Kosi and the Bahilla rivers. One of these is known as the Nathawala, a very old canal dug by one Nathu from the Kosi at Ramnagar for the irrigation of Kashipur. It is connected with a branch of the Ramnagar system, so that a supply can, if required, be sent down direct from the Kosi. This canal supplies the needs of some 24 villages, and its branches terminate in the rivers which supply it. The Khundesri canal is supplied from the joint waters of the Jhajra, Jurka, and Pathri streams, which is intercepted by the Jurka feeder and carried down by it to the Kharinasa dam. This feeder has been further extended to taking the supply from an old channel of the Kosi by means of an earthen dam. The canal, as far as Gangapur Bant, was constructed by Mr. Macdonald on a fair watershed line to supply the old gul which was formerly fed from a large dam, the remains of which are still visible, constructed by Mr. Boulderson, some time Collector of Moradabad. The waters of the canal reach seventeen villages. The Mahadeo canal is fed from the Khundesri by an artificial cut dug thence to the Bahilla; another similar cut just below the junction of the Jangli with the Bahilla carries on the collected supplies to the Gaibia dam. Below this dam, which is a fine masonry structure, the canal throws off several branches, having a combined total length of 45 miles and irrigating nearly thirty villages, half of which are in the Moradabad district. The average area irrigated from the Kashipur canals is somewhat over 8,000 acres and the revenue nearly Rs 10 000 annually the whole

of which has been expended on maintenance and new construction.

Generally speaking, it may be said that famines, in the ordinary sense of the term, are unknown in this district; nor do any of the records reveal any trace of the occurrence of anything approaching acute scarcity. There have, of course, been many occasions on which the prices of food grains have risen above the normal level, causing the pinch of poverty to be felt, but never has it been found necessary to organize relief. The reason for this state of things is obvious. In the hills, and indeed almost throughout the district, a serious failure of the rains is practically an unknown occurrence. In years of deficient rainfall many of the hill crops are liable to suffer, but these in general form, as it were, a supplementary source of existence to the people, the great bulk of whom rely on their Bhabar cultivation. Those villages in which the inhabitants do not migrate to the Bhabar generally have sufficient areas of irrigated *talaon* land which can always be watered from the rivers and streams. In the Bhabar the cultivation is entirely dependent on the canal irrigation, and this is practically always drawn from permanent sources, so that famine caused by seasonal irregularities is an impossibility. In the Tarai, the country is more liable to suffer from excessive moisture than the reverse. A failure of the rains is a very serious matter for the great rice harvest, but the deficiency can generally be supplied by the admirable system of irrigation. The Kashipur pargana is not so fortunately situated. There is room for improvement in the system of irrigation and many of the villages actually do suffer in dry years. It cannot be doubted that the scanty rainfall of 1896 had a very bad effect on the pargana as a whole. Though there was no actual famine, there was decided scarcity, and this fact lent much additional strength to the other causes that were bringing about the deterioration of the pargana.

There are no records to show the early history of prices in Naini Tal. Those given in the old Settlement Report refer to the district of Kumaun as a whole. In years of scarcity the prices of those grains which are imported from other districts must naturally rise, and that to an unusual degree and the same may

be said of those staples which are grown for export. Thus the records show that the price of rice remained constant between 1893 and 1903, and never rose in the famine year of 1896. On the other hand maize, which averaged 28·5 *sérs* in 1893, rose to 11·25 *sérs* in December 1896, and since then has fallen again, but not to the same extent, sixteen *sérs* being about the general average. The prices of barley, juar and bajra have been about the same as maize, save that barley rose very much higher in 1896. Wheat averages about twelve *sérs*, but rose to seven *sérs* at the height of the famine.

Wages show less fluctuation even than prices; and it may generally be said that there has been no change in this direction since the constitution of the district in 1891. On the whole, wages run very high: the average monthly wage for an able-bodied agricultural labourer is five rupees, and this is considerably in excess of the provincial average. The same may be said of the wages of *syces*, which average six rupees per mensem, or nearly 25 per cent. higher than the average wage for the United Provinces as a whole. The wages of a common mason, carpenter or a blacksmith range from ten rupees to fifteen rupees, whereas in 1902 the average for the province of Agra was from Rs. 8·96 to Rs. 10·28, and that of Oudh very much lower. These high wages are undoubtedly connected with the high prices of food-grains, but it is impossible to suppose that other causes are not also at work.

Closely connected with the subject of famines is that of the food of the people. In 1821 Mr. Traill wrote, and his remarks still hold good: "Rice forms the favourite food of all those who can afford to purchase it; wheat is only in partial consumption, chiefly on occasions of entertainments at marriages and the like. When the peculiar scruples of Hindus prevent the use of rice, vegetables of all kinds, both cultivated and wild, are objects of universal consumption: the list of herbs, roots and leaves considered edible by the natives is endless. During the periodical residence of the agricultural classes in the Bhubar their principal food is the *ghuiya* or sweet potato, boiled and eaten with butter-milk. Animal food is in much request among all classes: the favourite flesh is that of the goat or of the sheep where bred

against the sheep of the plains a universal prejudice exists, its long tail rendering it, in the eye of the highlander, a species of dog." This extensive use of wild vegetables for food is one of the reasons why famine can seldom be very severe in the hills, for they constitute a valuable food reserve, the supply of which is never likely to fail. In times of scarcity there are few products of the vegetable kingdom, which are not absolutely hurtful, that do not afford some aid to the poor man's table. The wild fruits, berries and leaves, too, that are brought under requisition, provide a lengthy list, while the number of trees whose foliage affords fodder for cattle when drought dries up the grass is hardly smaller. The value of the forests at such times is considerable, and it is then that the hungry flock to them from all parts, and try to eke out a miserable existence by collecting these wild products. With the poorer classes the millets such as *mandua*, *china* and the like, and the coarser pulses such as *bhat* and *gohat* form the staple food in the hills. The *mandua* is either made into bread or a porridge called *bári*, while *china* is also made into bread or boiled whole and eaten as rice. In the Bhabar the hill cultivator usually feeds himself with the poorer grains, such as *gunara* and coarse rice, while he sells his wheat and oilseeds. In the Tarai and Kashipur the food of the people is practically the same as in the southern districts, although rice is generally the staple diet, and especially with the Tharus and Bhukas. A certain amount of maize is grown for home consumption, but the millets are not used extensively except in the western parganas, where there is more cultivation of other kharíf crops than rice.

The standards of measurement in common use in the hills differ greatly from those of the plains. Throughout the former, the mode of calculating the measure of land was based primarily on the amount of seed required to sow it. The denominations thus varied in area with the character of the land, and this naturally led to great confusion and an endless number of terms. Of these the *bisi* was most commonly used in Kumaun, and on it the present standard *bisi* has been founded. It contains 20 *nalis*, the latter being an area that is supposed to require two *sírs* of grain for seed. The *nali* is for practical purposes equivalent to 240 square yards so that the *bisi* contains 4800 square yard.

or 40 yards less than an acre. This was the standard measure of the survey. Ordinarily in the hill patts of this district the subdivisions of the *nali* are annas and pies as in the case of the rupee. Thus an English acre is equivalent to 20 *nalis* 2 annas 8 pies. In the Bhabar and Tarai the land measures follow the use of the plains, and we have the *bigha* with its subdivision into *biswas*, *biswansis*, *kachwansis* and so on. The Bhabar *bigha* was formerly a square of approximately 86 feet—a very unwieldy measure, as it bore no exact relation to the standard *bigha*, the proportion being 3·7 of the latter to one local *bigha*. A modification was introduced in 1889, making the local *bigha* 82·5 feet square, or exactly one-fourth of the standard measure. In the Tarai the standard *bigha* of 3,025 square yards is in common use; but in addition there is a *kachcha* or local *bigha* equivalent to one-fourth of the standard measure, and amounting to 756·25 square yards, and this is always employed in the assessment of rent.

Similarly weights differ in different parts of the district. In the hills, besides the standard *sér* of 80 tolas, there are two others, one of 84 tolas and the other of 100 tolas. The 84-tola *sér* was fixed in the early days of British rule, and two of such *sérs* make a *nali*. In the Tarai and Bhabar, besides the usual standard *sér*, there is a heavy *sér* of 100 tolas. It is further noteworthy that in the Tarai we have the *panseri*, which is equivalent to two standard *sérs*, and points to the existence of a former *kachcha sér* of 32 tolas. The *kachcha* maund is still known in the Tarai, and in fact in two forms, for it sometimes consists of 20 and sometimes of only 16 *sérs*, the latter being derived from 40 *kachcha sérs* of 32 tolas. The other measures call for no comment. Mr. Traill introduced a *gaz* equal to the English yard, and consequently the *hath* resembling the English cubit of 18 inches. The *kos* in the hills is roughly a mile and a half, and in the Tarai a mile and three-quarters.

The trade of the district is almost entirely confined to agricultural and forest produce. The only commodity exported to a large extent is potatoes. These are grown both for local consumption in Naini Tal, Almora and Ranikhet and find their way to the large towns of the plains through the medium

of Banjaras and the Banias of Haldwani and Kaladhungi. According to inquiries made in Haldwani, it was ascertained that during the year 1900 no less than 32,371 maunds were bought up by the Banias; but this is only a portion of the amount actually produced and sold. From September to November an army of Dotial coolies is employed in transporting sacks from Binaik-dhura to the Naini Tal bazar, and the Bhim Tal, Mornaula and Kathgodam-Ramnagar roads are alive with strings of laden ponies. Grain also is continually carried from the plains to Naini Tal and other places on ponies which belong to the people of Kuttauli and the parganas along the Kosi, while large quantities of *ghí* are sold by the people of Dhyaniarau in Naini Tal. Taking the district as a whole, there is little trade in grain, and most of what is consumed is brought up by the people from the fields in the Bhabar. The fine villages in the Kosi valley can sell rice and wheat in Ranikhet and Naini Tal, while the people in parts of Kuttauli and Bisjyula also do some trade with Mukhtesar. While the trade in local production is not large, much traffic from the interior passes through the Naini Tal district, either in carts from Ranikhet to Kathgodam or Ramnagar or on the backs of coolies. Towards the end of the year large numbers of people may be seen carrying chillies from Garhwal down the cart-road from Mohan to Ramnagar, and the latter place is also a great depôt for the Bhotiya traders of the north. Incidentally this adds to the prosperity of the villages lying on the route as it means a continual stream of traffic which progresses slowly. In the Bhabar the trade is chiefly in forest produce and in rape-seed: the cultivation of this grain has increased enormously since the opening of the railway and it everywhere finds a ready sale. It is collected by the Banjaras at Haldwani and other depôts, whence it is exported to Cawnpore and Calcutta. A large amount of this rape is said to go to Russia, where it is converted into so-called Lucca oil. In the Tarai there is practically no trade with other districts; but in Kashipur and Jaspur large quantities of country cloth are manufactured and exported to the hills.

The weaving of cotton is the only manufacture of any importance in the district but even this has declined in consequence

of the competition of European goods. It is chiefly confined to the Kashipur pargana, and in 1898 there were said to be some 3,000 looms there, turning out cloth equal to any produce of the plains. Jaspur is the principal place of manufacture, and at the weekly markets held here it is bought up by Kashipur traders and others for retail sale in the hills. It may almost be said that the whole of the cloth worn by the hill women is made and dyed at Jaspur, and a large number of Chhipis or printers still find employment there. The cloth is known as *farrukhabadi*; it is in reality either *gārha* or *gazi* printed in bright colours in the well-known Farrukhabad style. In all other parts of the district only the coarsest *gārha* is woven, and even this industry is confined to the lower lying parts where cotton will grow, and is decreasing with the decrease of cultivation of cotton. Many of the dyes are produced in this district; chief among them is turmeric, which is largely grown here. Others are the rind of the pomegranate, which grows wild in the hills; catechu from the Bhabar forests; the flowers of the tām tree, and a number of miscellaneous dyes obtained from the *Terminalia* and other forest trees of the submontane tract. In the hill patti a small amount of weaving in goats' hair is carried on, the products being a coarse cloth which is largely used for clothing in Garhwal, ropes and sackings. The other manufactures, such as tea and those conducted by the Forest Department, have already been described.

In the appendix a list will be found of all the bazārs in the district and the day or days on which markets are held. The important marts, however, are few in number. Naini Tal itself has attained a considerable position in this respect, but the chief markets of the district perhaps are Haldwani, which has the advantage of being on the railway, and Ramnagar, which is served by the Rauikhet cart-road. The markets at Kaladhungi and Chorgallia in the Bhabar are of old standing and a considerable amount of commerce is still carried on there. In the south of the district the only important markets are at Kashipur and Jaspur. These have suffered with the general decline in the Kashipur pargana; there is every prospect of their

recovery if Kashipur is provided with a railway, as has been long proposed, in which case the general prosperity of the tract will probably be largely increased. In the Tarai itself there are no markets of any consequence, the small local bazárs merely supplying the needs of the surrounding population.

A second list given in the appendix shows all the fairs held in the district. They are few in number and only one or two of them are of much importance. The largest fair in the district is that which takes place at the temple of Balsundari Devi, three miles south-east of Kashipur, at the end of March, and lasts for fifteen days. This fair commences on the first day of Chait at this temple and after ten days is transferred to the Kashipur bazár. Some 70,000 persons assemble and a large amount of trade is carried on in all the produce of the hills and the Bhabar; the principal objects are live-stock, piece-goods, metal utensils, carts and agricultural implements, manufactures in wood and fibres and all manner of minor forest produce. On this occasion gambling is practised to a very large extent. The only other really large fair in the district is that at Melaghat on the Sarda in pargana Bilheri, which lasts for four days in the beginning of November, when about 40,000 persons assemble for the purpose of bathing in the river. A considerable trade is carried on here, of the same nature as that of Kashipur, with the addition of much Nepalese produce. In the other Tarai parganas small fairs are held at Gadarpur, Rudarpur and Kilpuri at the beginning of February; at Nanakmata a fair is held towards the end of October at the shrine of Nanak Shah, but this, like the others, attracts only a small number of persons; while elsewhere there are one or two similar gatherings. In the hills there are several fairs of considerable size, but none of them are of any commercial importance, as the only trade is confined to the products of the country. The largest are those at Bhim Tal in the middle of July, and at the temple at Chitrasila, close to Ranibagh, in the middle of January. Two fairs are held at Naini Tal in the middle of August and the beginning of September, but are of small importance. A large fair lasting for three days in the end of October is held at the temple of Kailas on the top of the hill of that name above

Chitrasila. In Kotah there is an equally large fair at Sitabani in the Dun in the middle of January, and a much smaller assemblage takes place at Tirth in the first week of February. In the Bhabar there are fairly large fairs at Haldwani, Kaladhungi and Ramnagar, on the occasion of the Ramlila in October.

The district is well provided with means of communication, at any rate so far as the number of roads are concerned; but they present remarkable differences in their character and utility. In the hill tracts the roads are numerous and for the most part good; only a few, however, are constructed for cart traffic, and the rest are merely bridle-paths of varying degrees of excellence or the reverse. In the Bhabar and Tarai metalled roads are very scarce; the lowlying portions of the country are difficult of access for a large portion of the year, and frequently the thoroughfares in common use are no better than mere tracks cut through the forest, difficult for even country carts to negotiate. The chief routes will be described in order, beginning with the railway and continuing with the roads of the hill country, and the lowlands. A list of the latter showing the class and length of each will be found in the appendix.

The only line of railway at present in the district is the main line of the Rohilkhand and Kumaon Railway company from Bareilly to Kathgodam at the foot of the hills. This line starts from Bhojupura junction in the Bareilly district, there connecting with the Lucknow-Sitapur-Bareilly State Railway which is now leased to the company. It was opened for traffic on the 24th of October, 1884. It is a metre-gauge line passing through the Tarai parganas of Rudarpur and Kilpuri, and thence through the Bhabar to Kathgodam. Its course is straight, from south to north. There are stations at Kichha in Rudarpur, at Lalkua in the forests of Kilpuri, at Haldwani and at Kathgodam. At first the railway terminated at Haldwani, and the remaining section was completed at a later date. This portion had subsequently to be realigned, as a considerable length of line was carried away by a landslide, and the rails were relaid further west and nearer the Bareilly road.

The roads of the district fall under several classes and are maintained by different authorities. There is but one provincial

road of the first class officially described as metalled, bridged and drained throughout. This is the main road from Bareilly to Naini Tal which runs through the Tarai and Bhabar past Kichha, Lalkua and Haldwani to Kathgodam, close to the railway. As far as Kathgodam the road is nine feet in width and 30 miles in length; from Kathgodam it is twelve feet wide and winds up the valley of the Ballia to the Brewery at Jeolikot, from which point the bridle-path to Naini Tal is usually followed. For cart traffic, however, the road turns back from the Brewery in a long detour so as to overcome the steep ascent, winding round the Nalena spur and entering Naini Tal above the Gurkha barracks. By this route alone can carts and heavy traffic reach Naini Tal from the plains and the railway. The length of the hill section is $31\frac{1}{2}$ miles, and the total cost of maintenance is about Rs. 26,000 annually. The charge is heavy, but is necessitated by the nature of the road, which is a magnificent work of engineering and is kept in excellent order. There is a dāk-bungalow at Ranibagh; inspection bungalows at Kichha, Nalena, Haldwani and Baldeo Khan; encamping-grounds at Satnia, Nagla, Hathikhal, Haldwani, Ranibagh and the Brewery; and cart *paraos* at Bhujighat, Dogaon, Amparao, Nalena, Belwakhan, Naikhana, Baldeo Khan and Manora. The other provincial roads are of two classes known as metalled roads bridged and drained throughout, and unmetalled roads partially bridged and drained. Under the former category the chief is the Ranibagh-Ranikhet cart-road, which as far as the Brewery is identical with the Bareilly-Naini Tal road. From Jeolikot onwards it is unmetalled, but in good order. It runs through Bhowali to Khairna, and thence over the Kosi to Ranikhet, the distance from the Brewery to the Almora boundary being nearly 18 miles. It is maintained at an annual cost of about Rs. 7,000. There is a dāk-bungalow at Khairna; inspection bungalows at Bhowali and Ratighát, with camping-grounds at the same places as well as cart *paraos* at Kuria, Bhowali, Tallanighat, Banskhet, Ramgarh and Garmpani.

The remaining provincial roads are six in number. The most important is the cart road from Ramnagar to Ranikhet, of

which nearly 30 miles lie in this district. This road constitutes one of the chief outlets for the traffic of the hills, and when the proposed extension of the railway to Ramnagar, from either Kichha or Lalkua on the east or Moradabad on the south, becomes an accomplished fact, this highway will of course become its main source of supply. Almost the whole trade of eastern Garhwāl and the Pali Pachhaon subdivision of Almora passes through Ramnagar, while a heavy traffic may be expected from the direction of Ranikhet, as that place has direct cart-road communication with Almora on the east and the interior as far as Baijnath on the north. The Bhabar section of this road is ten miles in length, and runs up past Dhikuli to Mohan along the Kosi valley; from Mohan the road is carried on the level for four miles to Khumaria, from which place it makes a long and gradual ascent to the top of the Kosi watershed. The road lies for the most part along the boundary of the Almora and Naini Tal districts. Over Rs. 8,000 are expended annually on the upkeep of the Naini Tal portion. There are encamping-grounds on this road at Banka Kuan and Ainsot, and cart *paraos* at Ramnagar, Garjia and Mohan. The other roads of this class are not constructed for cart traffic. The chief is that from Ranibagh to Almora, by way of Bhim Tal, Ramgarh and Peora, 31 miles of well-kept road. There was a steep and difficult bit in the ascent from Bhim Tal to Ramgarh, but in 1902 this was regraded, resulting in a great improvement.

Below Ramgarh there is a double track, the dry weather path being shorter and lying along the bank of the river, while the upper bridged road makes somewhat of a detour and is passable at all seasons. Three branch lines unite with this road. One leads from Bhim Tal to Bhowali, a fairly level road about four miles in length. The second is much more important, running from Naini Tal to Bhowali and Ramgarh; it is nine miles in length, but is a far from easy road, as the gradients are steep either way and the traveller has to face some long climbs. The third is a branch from Nathua Khan, between Ramgarh and Peora, to the Government bacteriological laboratory at Mukhtesar. Lastly, there is the bridle-road from Ranibagh to the Brewery. This is much used for pedestrian and pony traffic as it is

materially shorter than the cart-road, although naturally the gradient is steeper; it follows the course of the Ballia river throughout and is maintained at a cost of about Rs. 1,200 yearly.

The remaining roads of the district fall under three heads: local roads under the control of the District Board and kept up by the agency of the Public Works Department; roads belonging to the Tarai and Bhabar Government Estates; and roads maintained by the Forest Department. The local roads are all unmetalled and belong to three classes, officially designated as second class roads bridged and drained throughout, second class roads partially bridged and drained, and fourth class roads, banked but not surfaced, partially bridged and drained. Those in the hills differ greatly in character from those of the Tarai and Bhabar, and it will be better, therefore, to deal with each separately, irrespective of class, details of which will be found in the list given in the appendix.

The main routes from the hills to the low country are those already described, but there are one or two others of some importance. The chief is the old highway from Naini Tal to Moradabad, the hill portion of which runs from Naini Tal by the Kaladhungi gorge past Khurpa Tal, Dechauri and Kaladhungi to Garappu; from this point it leads through the Tarai past Bazpur to the Moradabad border and has a total length of 34 miles. The lower portion of this road was once metalled, but since the construction of the cart-road to Kathgodam it has fallen out of use, and is now relegated to the second class and is maintained at a cost of some Rs. 1,250 annually. One of the chief hill roads is that from Ghurari in Kutauli, which leaves the Peora-Almora road at the bridge over the Sual and runs along the left bank of that stream to its junction with the Kosi and thence to Khairna, continuing from the latter place to Ramgarh, a total length of $36\frac{1}{2}$ miles. From Ramgarh another road leads to Ratighat on the Ranikhet cart-road and thence *via* Pangot to Dechauri and Bajari, a distance of 34 miles in all. This system is completed by the road from Ratighat to Naini Tal. West of the Ramgarh and Dechauri road there is that from Danpo to Betalghat on the Kosi and on to Kalakhet a recently-constructed lue which gives access to the western hill

pattis. In the east there are the roads from Bhim Tal to Malwa Tal, and from Bhim Tal to Dhari and Mornauda in Kali Kumaun of the Almora district. From Dhari a branch leads to Mukhtesar and on to Peora. Thus it appears that in the hills, while the parganas of Ramgarh, Chhakhata and Dhaniyakot are fairly well supplied with roads, there are hardly any means of communication in the eastern parganas of Chaubhainsi and Dhyaniarau; the most important routes have no doubt been provided, but there is still room for considerable improvement in the way of supplying a need that is greatly felt by the inhabitants of the eastern pattis when they make their annual migration to the Bhabar. At present they are obliged to use the rough village tracks, most of which debouch on the low country by the Chorgallia gorge.

In the low country the chief means of communication are the Estates roads, and those under the control of the District Board are few. Mention has already been made of the old dak line to Moradabad; and besides this there are one or two others, such as the road from Ramnagar to Moradabad, a second class road, but almost impassable for cart traffic in the rains; the roads from Kashipur to Darhial and Thakurdwara in Moradabad; from Sultanpur in pargana Bazpur to Kashipur, Jaspur and Bijnor; from Jaspur to Ramnagar and to Rehar in Bijnor; and from Shafakhana in Bazpur to Dhanauri on the Ramnagar-Kashipur road. Thus the District Board roads in the lowlands are practically confined to the Kashipur pargana, and for the rest of the Tarai and Bhabar the roads are almost wholly under the control of the Government Estates authorities. A notable exception is the main Tarai road leading eastwards from Sultanpur to Rudarpur and Kichha, a distance of 18 miles which is maintained by the Public Works Department.

In the Bhabar the main thoroughfare is the submontane road which starts from Barnadeo on the Sarda and runs along the foot of the hills past Jaulasal, Haldwani, Kaladhungi, Bailparao, Ramnagar and Sawaldek into the Bijnor district, terminating at Hardwar. This route thus provides communication between Nepal and the Ganges and is largely used by pilgrims on their way to the great fairs at Hardwar and also

for the conveyance of forest produce. For this reason part of the cost of up-keep is paid by the Forest Department who themselves carry out their share of the repairs. The road enters the district on the east from the Kamin river and thence runs for seven miles to Jaulasal, crossing numerous torrent beds and being in places very difficult: thence for nine miles to Chorgallia, crossing the Nandhaur and its numerous off-shoots: from this place to Haldwani, twelve miles over the beds of the Sukhi and Gola, and twelve miles further on we reach Kaladhungi, passing on Chaunchala half way. From Kaladhungi the stages are Bailparao, nine miles, and Ramnagar, six miles; thence westwards to Sawaldeo and Laldhang, ten miles, after which the road crosses the Phika, the western boundary of the Bhabar. Parallel to this road runs the main Tarai road along the southern boundary of the district. Reference has already been made to this route, so far as the portion from Bijnor to Kichha is concerned. From Kichha the road runs for 14 miles to Sitarganj, and thence to Nanakmata and Khatima, 16 miles, and on to Melaghat on the Sarda, a distance of eight miles. There is a loop line between Kichha and Sitarganj by which traffic can, if desired, avoid the Barkoli forest which in this part stretches further to the south than in any other part of the Tarai, and traverses the cultivated tracts. This road is for the most part raised and the smaller streams are bridged. Travellers have, however, to ford the larger rivers, such as the Dewa, Kailas, western Bahgul, Baur and Ghuga; in some cases the bridges have been broken by floods, and it has not been considered worth while to incur the heavy expense of restoration: such are the old bridges over the Bhakra, Dimri and eastern Bahgul. There are boat-bridges and ferries over the Kosi, Ghuga, Naya and Pathri maintained by the District Board.

These two main routes are crossed by various roads running north and south. Beginning from the east we have the road from Barmdeo and Khatima to Pilibhit, which gives access to Champawat in Almora: the road from Chorgallia to Sitarganj and Pilibhit, joining the former on the southern boundary of the district the road from Haldwani to Rudarpur and Rampur, from Haldwani to Pipalparao and Gadarpur, from Sultanpur to

Chhoi; and from Jaspur to Chilkia. These are for the most part small local roads, not raised and only bridged in places, and are quite useless during the rains. The remaining roads of the Tarai are mere roughly-defined tracks intended for purely local traffic. The Forest Department, too, maintains a number of small roads in every division, and these form a useful means of communication from village to village, but such forest paths cannot be properly included among the lines of traffic of the district.

The district is very well provided with means of accommodation for travellers and officials. There is no longer a dāk bungalow in Naini Tal where the hotels render such an institution unnecessary. Outside the headquarters station there are numerous bungalows, classed variously as staging bungalows, Estates, Forest, and road inspection bungalows. Under the first head we have the dāk bungalows at Ranibagh, a stone building erected in 1866; Bhim Tal, a large and much-frequented bungalow dating from 1884; Ramgarh, on the Almora road, built in 1867; Peora, on the same route and of the same date; Khairna, on the Ranikhet road, built in 1864 and remodelled in 1886; Dhari, a stone building constructed in 1894; and Malwa Tal, kept chiefly for the use of tourists and sportsmen. At Kathgodam there is a bungalow for the use of travellers, belonging to the railway company. The restaurant at the Brewery is of the nature of a private hotel, although borne on the books of the Public Works Department.

The Estates bungalows are either old staging bungalows, or else have been built for the use of the authorities. Under the first category come the bungalows at Kaladhungi, Bazpur and Khatima, the last lying on the road from Pilibhit to Tanakpur, and dating from 1892. The others comprise the sessions house and superintendent's bungalow at Haldwani; the inspection-house at Bhim Tal, which is chiefly used by the Canal Engineer; the bungalows at Chorgallia, Ramnagar, Bailparao and Chhoi on the submontane road; at Kotah in the Kotah Bhabar; at Mangoli on the Naini Tal-Moradabad road; and those at Kichha, Sitarganj, Rudarpur, Gadarpur and Kashipur on the main Tarai road.

The Public Works Department inspection bungalows include those at Kichha, Haldwani, Nalena and Baldeo Khan on the

Barcilly-Naini Tal road; at Bhowali, built in 1885, and Rati-ghat on the Ranikhet cart-road; at Garjia on the Ramnagar cart-road; at Ramgarh and Betalghat. The forest bungalows in the Naini Tal subdivision include those at Kilberry, Ninglat, Jhaludeo and Kalona; in the Kumaun division at Haldwani, Dochaury, Chorgallia, Horai, Aonlakhera, Dhanaur, Shiuntra, Jaulasal, Kaladeo, Sainapani and Danda Kathauti, and in the Garhwál Division at Ramnagar, Maldhan, Garjia, Dhela, Mohan and Dhungalgaon.

There are no public or private ferries in the hill patts of this district, the reason being that the rivers where not fordable are spanned by bridges on all the more important roads. The Government ferries are confined to the Tarai and Kashipur. In the year 1903 there were altogether seventeen ferries in the district, and of these twelve were managed by the Government Estates, while the remaining five were District Board ferries, but maintained by the Estates' agency. A list of these ferries, showing the name of the river and the road on which they are situated, will be found in the appendix. In the case of the Estates' ferries no income is derived therefrom and no fees are charged, while the District Board's ferries bring in a very small and variable income. They are all situated on the main Tarai road running from Melaghat on the Sarda to Kashipur. The income derived from all the five ferries in 1903 amounted to Rs. 32 only, and the average for the three preceding years was but Rs. 45 annually.

CHAPTER III.

THE PEOPLE.

It is very difficult to trace the growth of population in this district owing to the constant changes of administration and the exchanges of different portions of territory between Naini Tal and Almora and other districts. In its present form, the district of Naini Tal did not exist till 1891, and consequently there has been only one census of the district as a whole. There are indeed records of the Tarai parganas and Kashipur as far back as 1854, but at that time and up to 1891 the Bhabar and the hill patts were all included in the single district of Kumaun, and as the parganas and patts were greatly altered in area by Mr. Beckett at the settlement of 1863—73, it is practically impossible to extract the figures for those portions of the hills for any date prior to the reconstitution of the various subdivisions. Consequently the first record of the population which has any close approach to accuracy is that of the census of 1872, at which time at any rate the whole of the area now comprising the district of Naini Tal was included in the Kumaun division. Taking the figures for the present area of the district only, we find that in 1872 it contained a population of 263,956 inhabitants, which gave a density of 99 persons to the square mile.

How far this figure was correct or not is impossible to state; for while it is known that under Sir Henry Ramsay's administration the Bhabar and Tarai showed an immense growth of prosperity and enormous areas of new land taken into cultivation, it is rather surprising to find that at the following census of 1881 the population had risen to 339,667 persons, an increase of 28·7 per cent. and giving a density of 127·7 persons to the square mile. In the Tarai alone the increase over the census of 1872 amounted to 10·4 per cent.—a most remarkable

figure for a tract in which the death-rate is almost always in excess of the proportion of births.

In 1891 the area which is now included in the Naini Tal district was ascertained to have a population of 356,881 persons, which gave a density of 131.2 persons to the square mile. This shows an increase of 17,214 or 5.1 per cent. above the total of the previous enumerations. The district was still in a very prosperous state, and in the Tarai the population was again on the increase, but only to the extent of 1.25 per cent.

The last census of the district took place on the 1st of March 1901. The ascertained number of inhabitants was 311,237, which showed a decline of no less than 45,644 persons or 12.7 per cent since 1891. The density now stands at 117.1 to the square mile—a figure that is considerably higher than the rest of Kumaun, but which is far below the proportion in any of the plains districts. Altogether, since 1872, there has been an increase of 17.9 per cent. in the population. The decline of the population observed at the last census was chiefly confined to the Tarai parganas and Kashipur, the population in the latter having decreased by 25 per cent.; there was also a decrease of over 9,000 persons in the Bhabar and hill pattis, but especially in the former. The chief cause was the deterioration of the south-western tracts, consequent on bad seasons and sickness as well as other reasons connected with the management of the Estates. It seems probable that the decrease was very much more marked in the earlier years of the decade, for since 1897 there has been a great recovery in almost all the Tarai parganas, so that it appears probable that in this tract and in the Bhabar also the population is once more on the increase.

One of the most remarkable features regarding the population of this district is its fluctuating nature: and this is apart from the annual migration to and from Naini Tal on the occasion of the transference thither of the headquarters of Government. During the cold weather the Bhabar becomes fairly thickly populated, whereas the hill pattis during the winter months are almost deserted. From every part of this district, as well as from the southern parganas of Almora whole families and villages move bodily down from the hills and cultivate their

lands in the lowlands of the Bhabar, returning to the hills again after the rabi harvest and the bursting of the shisham buds in March and April. The climate in some parts of the tract below the hills is very fatal from June to November, but towards the end of the latter month the Bhabar forests present a busy scene. They are then filled with wood and bamboo cutters, labourers hauling timber, men and women collecting grass, making mats and baskets, or herding cattle. After April all, except a few who have become acclimatised, leave the forests, which during the rains are practically closed. This description applies only in a less degree to the cultivated clearings of the Bhabar. In Chilikia, it is true, a larger proportion of the people are permanent residents than in the other pattis; but, on the whole, by far the greater proportion of the people enumerated in the Bhabar at the census of March 1901 had their homes either in the hill pattis of this district or in the southern parts of Almora.

This migration is very largely internal; that is to say, most of it takes place within the district itself, the majority of the immigrants to the Bhabar coming from the hill pattis of this district. A preliminary enumeration was taken in the autumn of 1900, and this showed a total of 61,023 persons in the hill pattis as against 43,738 in the following March, when most of the emigrants were still in the lowland villages. At the same time a very large number of persons come to the Bhabar from Almora and especially from the parganas of Phaldakot and Baramandal. The preliminary census for Almora shows an excess of 36,045 persons over the total recorded in March 1901, and while a considerable proportion of this went southwards from Kali Kumaun to the Tanakpur Bhabar of that district, yet many came to Naini Tal, although the exact numbers are not ascertainable. The Almora cultivators chiefly frequent the western villages of the Bhabar. The returns of the regular census show that only 55·74 per cent. of the inhabitants were born in the district of Naini Tal itself, while 41·84 per cent. recorded a birthplace in the adjoining districts, and only 2·26 per cent. came from other parts of India. These figures, however, do not merely represent the migration from the hills to the plains for the purpose of cultivation the population in the

Tarai, so far as the southern villages are concerned, is constantly being recruited by immigrants from the adjoining districts of Rohilkhand. If this was not the case, those parts would soon become depopulated on account of the insalubrity of the climate. One of the chief duties of the Superintendent of the Government Estates is to attract cultivators to the Tarai and to maintain a constant flow of immigrants, most of whom are Musalmans, from Bareilly, Moradabad and Rampur. This was not the case at the last census, but then there was a special reason, in that the population of the Tarai had shown so material a decrease, and the supply of immigrants had fallen off. The Tarai has a bad reputation for its unhealthiness, and consequently a large proportion of the settlers are bad characters who have found it expedient to change their residence. This fact operates adversely on the police administration; but the immigrants generally become too enfeebled by the climate to indulge in organized crime, and the high mortality tends to reduce the criminal population of the adjoining districts. There is not much emigration from the district, for the census returns show a proportion of only 8·8 per cent. of persons born in Naini Tal, but enumerated in other parts of India, and this is considerably below the average for the United Provinces generally.

Closely connected with this question is that of vital statistics.* The average birth-rate since 1891 for the whole district works out at 28·92 per millo, while the death-rate for the same period amounts to 42·46 per millo. That is to say there is an average annual deficiency of 13·54 persons in every thousand of the population. According to the vital statistics the population of Naini Tal should have been only 303,933 in 1901. We must undoubtedly allow a considerable margin for defective registration; but even so it is obvious that the population must have been largely increased by immigrants from without.

At the time of the last census the district contained 1,520 towns and villages with 68,187 houses. Of the former, no fewer than 1,498 contained a population of less than 1,000 inhabitants, and of these only 92 possessed more than 500. There were thirteen villages containing between 1 000 and 2 000 inhabitants;

and five between 2,000 and 5,000. Kashipur, the largest town, had 12,023 inhabitants, while Haldwani and Naini Tal contained less than 7,000 persons, and only one other place, Jaspur in the Kashipur pargana, had a population of over 5,000 souls. The urban population is thus very small in spite of the existence of three municipalities, amounting to little over fourteen per cent. The average number of persons per house is 4.56, a lower figure than in any adjoining district except Bijnor.

According to the latest figures, males numbered 172,970 and females 138,267. The disproportion of the sexes is somewhat exceptional owing to the large number of immigrants, but apart from this it is very clearly marked. There are only 799 females to every thousand males, and this figure is alone surpassed by the district of Dehra Dún. The difference in numbers between the sexes is greatest in the hill pattis, as is only to be expected; but nowhere does the proportion of females rise above 86 to every hundred males, this being the figure for Kashipur; while in the Tarai and Bhabar it is very much less. The disproportion cannot be wholly ascribed to immigration; it is not only a well-known phenomenon of all the western districts of the United Provinces, but it is abundantly established by the vital statistics; since 1891 there has been an average of 5,015 births of boys recorded annually, while the corresponding figure for girls is no more than 4,589. The former figure according to the census returns should be about 5,735, so that this affords a rough estimate of the annual immigration.

The vast majority of the population are Hindus. The returns of the last census in 1901 showed that of the inhabitants 233,457 or 75 per cent. were Hindus, 75,988 or 21 per cent. Musalmans, 1,417 Christians, 212 Aryas, 104 Sikhs, 40 Jains, 15 Buddhists, and four Parsis. Of these, the Buddhists and Parsis may be briefly dismissed; the former are Tibetan traders passing through the district, and the latter shopkeepers in Naini Tal. The preponderance of Hindus over Musalmans is very marked everywhere except in the Kashipur pargana, where the numbers are nearly equal, and in the western parganas of the Tarai. It is most noticeable in the hill pattis, in which there were only 1,972 Musalmans as against 40,637 Hindus

The importance of the Himālayas in the history of religion in India is mainly due to the existence therein of the great shrines of Badri and Kedar, containing forms of Vishnu and Siva, which still hold a foremost position in the beliefs of the great majority of Hindus, and the comparative proximity of these shrines to this district tends to render the religious feelings more strong, at any rate in the hill patti, than in the more distant districts of the plains, excepting those areas that are similarly affected by local religious centres of their own.* The religious faith of the Kumaonis may be said to consist of a fusion of the Puranic, the Buddhistic and animistic ideas. They fully believe in the law of *karma* or action and the doctrine of the transmigration of the soul. By doing certain acts or by certain omissions in a former life a man takes his birth in certain forms. If a son dies, his death is attributed to his having been a creditor in his former life and having died after realizing all debts due to him. For this reason even time-barred debts are paid for fear lest the creditor should become the debtor's son in this life or the next and render his days bitter by his premature death. All calamities and physical sufferings are attributed to bad actions in a previous life. These beliefs allow the people to bear the greatest afflictions with a philosophic calm—a truly Buddhistic idea which shows what a strong hold the Buddhistic influence still possesses in these parts.

The form of worship and the religious rites are strictly Puranic, and there is very little essential difference in the rites as practised in the hills and those of the plains. The marriage and death ceremonies and those connected with the sacred thread are the same. The twice-born castes perform morning and evening worship by reading the *mantras* or Vedic hymns. The Doms are forbidden to read any sacred books and do not perform any regular Hindu worship, nor do they wear the sacred thread. The Hindus are almost all *smarts*, or followers of Shankar Acharya, and must worship the five gods, viz. the sun, Vishnu, in one of his forms, Shiva or Mahadeo, one of various Sakti forms, and Ganesh. A true *smart* will

worship all these gods and none others; but in practice no one obeys this rule. The daily rites and customs are regulated by the Manu, Yajnavalkya and Parasar *smritis*. In the case of the higher castes, property is divided according to the strict rule of Manu: that is to say, if a man has two wives and issue by both, each son will inherit an equal share. But in the case of Khasiyas, local custom, recognised by the civil courts, ordains that equal shares go to the joint offspring of each wife, one son by the first wife, for instance, obtaining a share equal to that of ten sons by the second; this is known as the *sontiya bant*, or division by wives. This point is of great interest, as tending to prove that the Khasiyas are a distinct aboriginal race which never came under the influence of the *puranas* and *smritis*. The most important temples of Puranic worship in this district are those at Bhim Tal, Naini Tal, Amel in Kosyan, Ranibagh, Kailas, Mukhtesar, Khairna, Naukuchhya Tal and Kashipur. There are few real Vaishnavas in the district, for all Kumaonis either take meat or intermarry with persons who eat meat—a thing that no true Vaishnava may do. The only regular thakur-dwara is that recently erected at Haldwani by Debi Datt, tahsildar. Similarly there is no pure Saivism, for the Kumauni religion is a mixture of several faiths. So, too, there are but few Ramandis and no Vallabhacharyas.

Demon worship is very common among the lower classes, and to some extent enters into the purer faith of the twice-born. In Kumaun we have Brahmans and Khas Brahmans, Rajputs and Khas Rajputs. Speaking broadly, the Khasiyas depend solely on their demon gods, while this worship only appears in faint traces acquired by association in the Puranic religion of the later immigrants, and this is perhaps the best test for identifying the Khas from the pure Brahman or Rajput. Both follow the same ritual in their daily worship, but after bathing and reciting the sacred hymns, the Khas Brahman or Rajput worships one of the demon gods instead of following the Puranic form. This demon worship may be described as due to the sting of conscience or an awakening to the sense of sin. A common form of origin might be as follows—A man ill treats his wife in order to marry another. She kills herself, or he

may kill her, and he takes another wife to himself. From this second wife he may get sons, and some of them may die. The second wife becomes alarmed and ascribes the misfortunes to the influence of the departed spirit, and thus this spirit, which has to be appeased, becomes in time the family god. Similarly the souls of all who have met with a violent or cruel death will be worshipped by their murderers. All calamities and misfortunes will be ascribed to these malignant spirits, and each must be propitiated by the members of the family concerned. These demon gods have their own priests, known as *gantwa* or *jagariya*. If any calamity occurs, their services are put in requisition and an atonement in the form of an offering is prescribed. Failures to avert calamity are due to fate and destiny which cannot be changed, and so the system continues from age to age. As these gods exert merely evil influences, they are more dreaded than the Puranic deities, who are more quiet and well meaning.

Naturally these demon gods belong rather to the mountains and forests than to the towns. Every rock or rivulet has its own deity and some appropriate legend. In the towns the spirits of general gods are rather recognised. Thus Bholanath is the favourite god of the Doms and lower castes; he is said to have been the elder brother of the Raja Gyan Chand, by whom he was murdered and thus became a demon spirit; he is usually resorted to on the occasion of any sudden calamity, but is chiefly worshipped in Almora. So, too, Ganganath, a popular deity, was a Dotiyal prince murdered by a Joshi in patti Salam of Almora, and his worship as a malignant power is common throughout Kumaun. Of the country gods, there is Goril or Goriya, who has temples in Basot of patti Uchakot and many other places, such as Hairiyagaon of Chhakhata and Ranibagh of Chauthan, and numerous small shrines on the hills above the villages. Badhan is another, the tutelary god of cattle. Again, there is Haru, a beneficent spirit, the story going that he was a Raja of Champawat, who became a faqir. The others need no mention; they are very numerous and only of local importance. Traces of the ancient Naga worship are also to be found in this district but they are now chiefly connected with the cult of the P c gods. There is a temple of Karkotak Nag

in Pandegaon of Chhakata, and others in Dhyaniarau. In Hindu mythology Shiva is the god of serpents, and worship of the Naga is said to propitiate him also. Such worship which takes the form of offerings of milk only occurs on certain fixed days, such as the Nagpanchami.

Of the various castes of Hindus in this district the most numerous are the Rajputs, amounting in 1901 to 50,560 persons or 21.6 per cent. of the total Hindu population. Only a small proportion of these, numbering 10,669 persons, were found in the Tarai and the Kashipur pargana. Nearly half, or 23,641, were residing in the Bhabar at the time of the census and the remainder in the hill pattis. None of the Rajputs of this district belong to the well-known clans of the plains. The great mass of them are Khas Rajputs or Khasiyas, who take their clan names from the villages they inhabit or from some fanciful cause. In the Tarai and Kashipur, indeed, there is a considerable number of persons calling themselves Chauhans, but these as in Bijnor and Moradabad are not Rajputs at all, but resemble Muraos; they do not wear the sacred thread. There are, however, a few who claim to be of higher origin than the Khasiyas. Among these the chief are the Raotelas, the descendants of the younger branches of the Chand family, whether legitimate or illegitimate. The most important of these Raotelas is the Kashipur family, of which mention will be made later. In pargana Dhyaniarau there are two villages, Jamrari and Raotelakot, still occupied by the descendants of the Chands, the first being the birthplace of Shib Singh, the last Raja of Kumaun. Another well-known Raotela village is Parewa in Kotah, which with Jamrari is esteemed the principal of all the Raotela villages. Besides these we have Bachkande in Mahruri, and Simalkha and one or two other villages in Dhaniyakot. The Bishts do not properly belong to this district, but are immigrants from Almora. A few Adhikaris, a subdivision of this clan, are to be found here, and especially in Kairagaon of patti Malli Rau in Chaubhainsi. The Boras, who colonised Borarau in Almora, are to be found in small numbers in Dhyaniarau and elsewhere among them may be mentioned the thokdar of Belwakhau near Nain Tal. The

Mabras, too, occur in pargana Chhakhata in a few villages; while the Padyars, who take their name from Padyarkot in Chaugarkha, occur in Chauthan. The Bhandaris, who claim to be Chauhans and to have been settled in Kumaun as long as the Chand family, occur in the Kosyan pattis of this district in the villages of Belgaon and Majhgaon. All these so-called Rajputs are of very impure descent, even if they originally migrated from the plains. The poorer members of each clan have no hesitation in marrying with the regular Khasiyas. The number of the Khasiya clans is legion, and it is impossible to give a complete list even for this district alone. Their occupations are primarily agriculture and service and sometimes trade and coolie labour. They form marriages with all Rajputs except in their own villages. Several of the clans claim some traditional origin; thus the Dármwáls derive their name from *dárim*, a pomegranate, stating that they provided the Raja with this fruit; they are found in Uchakot and Ramgarh. The Chaláls, who occur in Dhaniyakot and Uchakot, were decorators; and the Dyokas, who occur in Mahruri Talli, are said to be the descendants of temple prostitutes. Among the other Khasiyas may be mentioned the Sauns, who are found throughout patti Agar; the Jakhwáls from Jákhn near Naini Tal; and the Nauniyas, who claim to be Bishts, residing in one village of Dhaniyakot.

Next to the Rajputs come the Brahmans who numbered 36,444 persons in 1901, or over 15 per cent. of the Hindu population. At the time of the census, 19,200, or more than half, were residing in the Bhabar; 11,400 in the hills, and only 5,643 in the Tarai and Kashipur. A fair number of these people belong to the higher orders of Brahmans, but at the same time the majority, as in the case of the Rajputs, are Khas Brahmans—a most important distinction, for a real Brahman will neither eat *kachchi* nor *pakki* from a Khasiya, so that the two are absolutely distinct. The true Brahmans are the most important portion of the hill population, but the chief families trace their origin to villages in the Almora district. A large number of them are in Government service but of these very few have their birth place in this district. Of the various Brahman subdivisions, the

Tiwaris, who claim to be the oldest clan in the hills and even state that one of their ancestors founded the Chand family, only hold one village in this district, Majhera in pargana Dhaniyakot. The Panta are more numerous. There are a few zamindars of this clan in Malla Kosyan; and others are found in the village of Silauti, in the pattis of Agar and Chhakhata and also in Dhari and Bhatgaon. The Pandes, who appear to have come at an early date to Kumaun about the same time as the Panta, are found in Pandegaon of Kotah, and in another village of Pandegaon as well as Silauti, Barakheri, Basgaon and Salri in pargana Chhakhata. The Joshis of this district all trace their origin to Almora. Besides the immigrants from that place, there are few zamindars of this clan in Dhaniyakot, especially the Budlakoti Joshis of Budlakot on the road from Dechauri to Ratighat. Besides these there are a few Bhats, who also claim to be Brahmans. These people are more common in Almora, but some are to be found at Kaphuli of Malli Rau and a few other villages in the hills. Of the Khas Brahmans there are some 250 clans in Kumaun, taking their names in almost every case from the villages in which they reside. Some of them claim to be connected with the higher grades of Brahmans and others trace their descent from the clans of the plains; but these alleged connections are of recent origin and probably have no foundation in fact. The Brahmans of the Tarai belong chiefly to the great Gaur division, and are immigrants from the southern districts.

The Doms, who form the bulk of the lower castes in the hills, numbered 32,968 persons or 14 per cent. of the Hindu population. They are almost solely confined to the hill pattis and the Bhabar, for in the Tarai and Kashipur their place is taken to a large extent by the ordinary low caste population of the plains. The Doms are apparently an aboriginal race and from time immemorial have played the part of serfs to the Khasiyas. According to popular estimation, they are divided into four grades, all equally impure and outside ordinary caste life, but furnishing certain distinctions in occupation and the like, which bring the first grade very close to the lower forms of the Rajput clans. To this first class belong

the Kolis, who are cloth weavers and agriculturists, and keep all kinds of animals, pigs and poultry ; the Lohars, the blacksmiths of Kumaun, who are to be found in every part of the hill tracts and usually receive some land in return for their work or else are engaged as cultivators ; a certain number of the Lohars are known as Tirwas or Saigalgars, their peculiar profession being that of armourers ; the Tamtas or Tamotas, who corresponded to the Thatheras of the plains ; the Orhs, to whom belong the carpenters, masons and stone-cutters, including the Baris or quarrymen ; and the Dharis, who are Khasiyas degraded for caste offences. In the second class we have the Agaris, who gave their name to patti Agar in the Ramgarh valley. By profession they are miners or ore-smelters, and for some centuries they were practically slaves in the mines ; but of late years they have found a far more remunerative occupation in road making, and some are now wealthy men and good cultivators. The Agaris marry with Orhs and do not wear the sacred thread, but since they have begun to increase in prosperity they are rapidly becoming Hinduized. They, however, eat animal food except pork and beef, and take it from the hands of any castes except the lowest grades of Doms. Other tribes belonging to this class are the Ruriyas, who correspond to the Bansphors, and manufacture baskets and matting ; the Chimyaras, who are turners and make wooden vessels ; the Pahrís or village messengers, who act as aids to the headmen and receive in return a small rent-free field ; and the Bhuls, who correspond to the Telis of the plains, but are also cultivators, and like all the rest keep pigs and poultry. The third class comprises the Chamars and Mochis, who work in leather and in the hills call themselves Bairsuwas ; Handkiyas or potters, and a few others. The fourth class comprises the vagrant tribes of musicians and dancers, such as the Bádís, the Hurkias and Dumjogis, all of whom are more or less disreputable, and the Darzis, also called Aujis, who are tailors and also cultivators and labourers. The portion of the village assigned to the Doms is known as the Domaura or Domtola. The name Haliya was given to those employed as ploughmen and these people up to 1840 with their families could be sold with or without the land. The Chyora or domestic slave could

with his family be sold or given away without any reason assigned, even although he were a Khasiya who had voluntarily entered into service on account of poverty. None of the other Doms could be sold, although each was obliged to do service for the villagers according to the trade or occupation he practised, but was entitled to receive a present in return. At other times they could dispose of their services as they pleased. The first and second classes intermarry, as do the third and fourth.

Next in order come the Chamars, numbering 23,329 persons. Of these, 16,361 belong to the Tarai and Kashipur and almost all the remainder are settlers in the Bhabar. They are chiefly agriculturists, but also deal in hides. They closely correspond to the lower castes of Doms in the hills, and call for no special mention. It is noticeable, however, that in the Tarai Chamars follow the practice of the Doms and style themselves after their occupation, for most of the Lohars and Barhais of the plains parganas are merely Chamars in reality.

The Tharus are the only other Hindu caste which has over 10,000 representatives. At the last census they numbered 16,085 and were almost entirely confined to the Tarai parganas. These Tharus are a most interesting people and call for some detailed mention, as they are far more numerous in Naini Tal than in any other district of the provinces. They are also found in the low country of Garhwál and in the Himálayan Tarai as far east as the Gorakhpur district. In this district they occur from the Kosi eastwards and are chiefly found in the parganas of Kilpuri and Nanakmata. They appear to be an aboriginal race who claim royal descent on the female side, the story going that once upon a time in the remote past when the king of these parts was defeated by the forces of an invader, the women of the royal palace rather than fall into the hands of the foe fled into the jungles with the Saíses and Chamars belonging to the palace; from these sprang the two indigenous races of Tharus and Bhuksas, the former being descended from Chamars and the latter from the Saíses. Whatever element of truth there may be in this tradition two facts are noteworthy: the Bhuksas alone wear the sacred thread of the Hindus, and among both

ances the women of the household occupy a far higher position than the men. A Tharu wife in fact will not eat with her husband, whom she invariably regards as her social inferior. It is just possible that this custom may be a relic of polyandry; but this is a mere suggestion, as there is no other survival to bear it out. The Tharus are essentially a jungle folk; they are never happy when separated from forests and rivers. They are great hunters and great fish-eaters, a simple, cheery people deeply imbued with the spirit of the jungle, which is to them their home. Consequently they are, like all forest-dwelling races, intensely superstitious. A more haunted, devil-ridden race could not be found; and this is a perfect curse to them. They have their own priests or *bhararas*, as they are called, who must be consulted on every occasion—a practice which involves a heavy expenditure for the unfortunate Tharu: for the Bharara, besides exacting a fee for the consultation, almost invariably prescribes a large feast as the only means of propitiating the offended deity. From habituation and from a long course of natural selection, the Tharu has become almost immune from the deadly malarial fever of the Tarai; it is not true, as is usually asserted, that the Tharu never suffers from fever; but it is an undoubted fact that he is able to live and flourish in a climate which is generally fatal to immigrants from other districts. Nor do we find an excessive infant mortality among the Tharus; the difference in appearance between Tharu children and those of southern parentage is always striking; while the death-rate among the plainsmen in the tarai is 60 per cent. greater than that among the Tharus of the same pargana. There is no doubt that they are the only race that can thrive in the eastern part of the Tarai, and on this account it is of the highest importance to keep them there. The Tharu is an excellent cultivator, and will till about four times as much land as a plainsman in the same neighbourhood; but his migratory habits and his love for breaking up new soil make it difficult to prevent him from bolting. Mr. Macdonald made a successful experiment in tethering the Tharus by giving them the greater part of Nanakmata on contract, but in the *khām* villages of Kilpuri there is no hold on them

whatever. Their indebtedness is one of the chief reasons for desertion: and this is caused by their simplicity. They constantly fall victims to the Pahari money-lender, who comes down in the cold weather and works for the Tharu as a labourer, returning to the hills after lending his wages to his master at a rate of interest which is seldom lower than the form known as *sud sawaya*, or 25 per cent. To this is usually added *up* an interest in kind, which may amount to as much as five *sérs* per rupee lent. Another form is *miti*, or two annas in the rupee per month. In Bilheri the place of the Pahari is generally taken by the Pilibhit Banjara. A second enemy is the Panjābi trader, who frequents the Tarai in the cold weather; while the Tharu's taste for drink increases his indebtedness. The usual result is flight into Nepal, whence he never returns. In Bilheri, however, the Tharu population is on the increase. In this pargana they are far more advanced than in Oudh, and almost all the patwaris belong to this caste.

The Bhuksas correspond to the Tharus in the western half of the Tarai; but they are not nearly so numerous, amounting in all to 4,364 persons at the last census. In their habits and customs they closely resemble the Tharus, but are much more backward. Sir Henry Elliot writes: * "They claim to be Panwar Rajputs and assert that their chief, Udiyajit, was driven from house and home in a quarrel that he had with his brother, Jagatdeo, the Raja of Dharanagar, and came to dwell with a few dependants at Banbasa on the Sarda. Udiyajit had not there been long before his aid was solicited by the Raja of Kumaun, whose territories required defence against some of the neighbouring powers. Success attended the efforts of the Panwar, and the gratitude of the Raja induced him to offer his defenders an asylum in his territories." This tradition we can unhesitatingly reject, for the Bhuksas have nothing in common with the other immigrants from the plains. There is no doubt that their settlement in the Tarai is of ancient date, for in the *Ain-i-Akbari* the name Bhuksar was given to the parganas of Rudarpur and Kilpuri. The Bhuksas seem to be as immune against the deadliness of the climate as the Tharus. They bear an

excellent moral character, but are very shy and ignorant. Like the Tharus they are constantly changing their habitation. Colonel Grigg, in his memorandum on Mr. Boas' report of 1898, writes: "The Bhuksa is a hardy little fellow, who loves an open country with plenty of water. He generally locates himself near the source of the springs, and is a great engineer in his own little way by turning them to account. All he requires is a little assistance when his guls get too deep, and this is now given."

There are but very few other castes which are strongly represented in this district. Besides those already mentioned, the Malis, who numbered 7,481 persons, and the Kahars and Kurmis alone were over 5,000 in number. These belong to the cultivating castes of the plains, as also do the Ahirs, Lodhs, Muraos and Kisans, who occur in numbers between 2,000 and 4,000. The Malis are found in greatest numbers in the Kashipur pargana, the Chilkia Bhabar and the Tarai pargana of Bazpur. Like all the others, they are immigrants from the southern districts. In the east of the Tarai their place is taken by the Muraos. The Kurmis are entirely confined to the Tarai, as also are the Kisans, these being the two principal cultivating castes of eastern Rohilkhand. Very few of these plains cultivators ascend to the Bhabar, except as regards Chilkia, much of which closely resembles the Tarai. The Gadariyas or herdsmen also reside for the most part in the Tarai, for in the hills there is no particular caste devoted to the care of cattle. Gujars are not very numerous in this district, but there is a certain number in the Tarai all occupied in tending cattle, and they have a bad reputation here as elsewhere as cattle-stealers. The Ahirs also are professionally cattle-breeders, and are chiefly found in the western parganas of the Tarai and Kashipur. Of the other immigrant castes little need be said. They are a very mixed lot and come from all parts; their universal occupation is agriculture, whatever their original profession may have been.

In the hills there are one or two miscellaneous castes of some interest or importance. Chief among them are the Sauns, who numbered 856 persons in 1901, the Nayaks, numbering 684, Luls and Rawats. These people are probably all either

Doms or else represent spurious races descended from Doms and Khasiyas. None of them are entitled to the sacred thread, even under the lax rules of the hills. Mr. Goudge considered them to be probably the descendants of aboriginal tribes. The Nayaks occupy a large village in the Ramgarh valley, and also have one of the finest estates in the Bhabar near the town of Haldwani. According to the tradition, this singular caste owes its origin to the war of Bharati Chand with Doti, when the first standing army in Kumaun took the field and the soldiers contracted temporary alliances with the women of the place, whose descendants became known as Khatakwalas and eventually as Nayakas, from the Sanskrit *nayaka*, a mistress. The male children are called Nayaks and the daughters Patas. The men live by cultivation and trade, but the women are brought up from childhood as dancing-girls and courtezans, and are widely spread over India. They are people of considerable wealth, and their village in Ramgarh for houses and standard of comfort is infinitely superior to any other in the district. The Sauns come from Agar and are hereditary miners and smelters of iron; since the abandonment of the iron mines they have become labourers and small contractors, and being an acute and laborious race they are generally well off. Some of them hold considerable lands in the Bhabar. The Luls belong to Chaugarh and are connected with the tribe that formerly ruled in the Tanakpur Bhabar. They are purely agricultural people and call themselves Rajputs, although they probably have no claim whatever to the title. The Rawats hold a few villages in Chhakhata and lay claim to royal origin, but they do not assume the sacred thread.

The Vaishyas are not very numerous in this district, but are people of considerable wealth and importance. Banias numbered 4,852 persons in all and belong chiefly to the Agarwal subdivision. They are descended from immigrants from the plains and are found in all parts of the district except the Tarai. They are most numerous in Kashipur and the Bhabar Kotah, while in the hill patts over 65 per cent. of the Banias are Agarwals, and in their habits and customs have practically become hillmen. Under the same head come the Sahus or Sahs, who belong to the family of the Almora Chandhrs. Some of them

claim to be Rajputs, others style themselves Khattris, while others again say that they are descended from Agarwals, who have immigrated into Kumaun. The Khattris proper numbered 414 persons at the last census, and of those almost all belong to the towns of Jaspur and Kashipur. There are about 1,000 Kayasths in the district, of whom 750 belong to the Tarai and Kashipur, and the remainder to Naini Tal itself, the latter being properly residents of the plains, who are engaged in Government and other service.

Turning next to the Musalmans we find, as is only to be expected, that the vast majority reside in the Tarai and Kashipur to the south of the district. In the latter, Musalmans are almost equal in numbers to the Hindus. In the Tarai they are most numerous in the western parganas, being comparatively scarce in Bilheri, Nauakmata and Kilpuri, the first of these containing only 1,513 Musalmans. In the western half of the Tarai, however, the case is very different; in pargana Gadarpur they are actually found in considerable excess, numbering 8,519 out of a total of 14,623 inhabitants; while in Rudarpur and Bazpur they amount to nearly 50 per cent. of the total population. There has been a considerable decrease in the number of Musalmans of late years, for in 1881 they amounted to over 36 per cent., as against 24.41 per cent. of the whole population at the present time. This decline is entirely unconnected with the question of the comparative rate of increase on the part of Hindus and Musalmans. In almost every other district it has been observed that there is a marked tendency for the latter to increase more rapidly than their Hindu brethren; but in Naini Tal the Musalman population is almost wholly supplied by immigration from without. In this part of the district, as with the Hindus so with the Musalmans, the number of deaths greatly exceeds that of births for every thousand of the population, and therefore the numbers can only be kept up by reinforcements from other districts. In the Bhabar there is a fair proportion of Musalmans, who have been long settled there, amounting to about thirteen per cent. of the population. One-third of them reside in the town of **Haldwani** where they are chiefly employed as traders and

carriers. There are very few in Chaubhainsi Bhabar, but a fair number in Kotah, where their largest colonies are in the towns of Kaladhungi and Ramnagar and the village of Dhikuli; and also in Chilkia there are a considerable number of Musalman settlers who cultivate the land, chiefly Pathans from Moradabad and Bijnor. In the hills there are very few Musalmans, and almost the whole number belong to the settlement of Naini Tal itself. Outside the station and its immediate vicinity Musalmans are hardly to be found, almost the only exceptions being Mukhtesar, where a certain number are employed in the Government Laboratory and on the road from Kathgodam to Almora, which is frequented by Banjara carriers. The whole Musalman fraternity is regularly organized here as elsewhere; there are Qazis at Naini Tal and in the Tarai. There are very few mosques in the district, the chief being those at Naini Tal, Haldwani, Kashipur and Gadarpur; the last is an old building erected during the days of Pathan rule about 120 years ago.

Of the total Musalman population Sheikhs number 18,515 or 24 per cent. One-half of these are of the Siddiqi subdivision, the remainder being chiefly Qurreshis, who predominate in the Bhabar and Naini Tal itself. Next come Julahas, numbering 12,791 or nearly seventeen per cent. These are mostly cultivators, although a certain number of them follow their ancestral occupation of weaving in Kashipur and the Tarai. They are almost all immigrants from the southern districts, and are the strongest of all the Musalman subdivisions in the Tarai. The other Musalman castes and subdivisions call for no special mention, none of them having as many as 5,000 representatives; the most numerous are Turks, Faqirs, Pathans, Rains, Telis, Barhais, Behnas and Mewatis. The Turks are entirely confined to the Tarai tahsíl. They are more numerous in this district than in any other part of the United Provinces, and indeed only occur elsewhere in Bareilly and Moradabad. There are, however, very large numbers of them in the adjoining Native State of Rampur. Sir Henry Elliot considered them to be a tribe of Banjaras, but they themselves stoutly deny the connection, claiming to be descended from western invaders who accompanied the Moghals. At present they are

a purely agricultural race, as also are the Rains, a caste which only occurs in larger numbers in Pilibhit, but which is found in many parts of Rohilkhand and the northern districts of Meerut. The Pathans chiefly come from Rampur and are a very heterogeneous lot, no single subdivision of them being in any way prominent. A few years ago numbers of Panjabis immigrated to the Tarai, but soon left on account of the climate.

The Arya Samaj is of no great importance in this district, although there are six recognised lodges of the fraternity. Of the whole number, 110 live in the Bhabar, 83 in Kashipur, ten in the Tarai, and only nine in the hills. The total number increased from 130 in 1891 to 212 at the last census, but the movement has made no great progress and shows no signs of any rapid extension. The majority of the Aryas in this district are Brahmans; the remainder are of various castes, chiefly Banias, Rajputs and Kayasths.

The Sikh religion can scarcely be said to have a permanent footing in this district. There is indeed the old Sikh shrine of Nanakmata in the Tarai, but the number of Sikhs in the whole of that tahsil was returned as ten only at the last census. The remaining 94 followers of this religion are mostly strangers belonging to the police force or otherwise employed in Government service. The Jains are almost wholly confined to the Kashipur tahsil and reside in the towns of Kashipur and Jaspur, where they occupy a somewhat prominent position as traders.

There remain the Christians. These vary in numbers greatly according to the season, and the returns are consequently deceptive. The census of March 1901 showed a total of 1,417, of whom 1,074 resided in the Naini Tal tahsil, 196 in the Bhabar, 86 in Kashipur and 61 in the Tarai. From this it will appear that Christianity has made no great strides among the native population. No less than 758 of the total number were Europeans or Eurasians, and only 659 natives. Of the latter, 201 belonged to the American Episcopal Methodist church, 59 were Presbyterians, 193 Roman Catholics, 38 of the Anglican Communion, and the rest of other or unspecified denominations. Small though the numbers are, they have

greatly increased of late years, for in 1891 there were only 15 Native Christians recorded in the census returns.

The work of the American Methodist Mission began as early as 1857, when the Rev. W. Butler came for refuge with his family from Bareilly to Naini Tal at the outbreak of the mutiny. He hired a house above Malli Tal and opened an English service there. In the next year he was joined by four others, one of whom, the Rev. S. Knowles, remained in charge after the departure of the other missionaries on the restoration of order in the provinces. A small vernacular boys' school was started in the upper bazár, and a similar school for girls was opened in Talli Tal, while services were begun for soldiers at the Convalescent Dépôt. In 1859 the Mission Hall, the oldest chapel belonging to the mission in these provinces, was built and has been since used regularly for native services. Adjoining it is the native high school with its clock-tower, a very flourishing institution with an average of 113 scholars. The mission also supports two good English schools. That for boys is known as 'Oak Openings' and stands on the Sher-ka-danda ridge; it has an annual average of some 80 or 90 boarders and is supported from the income of 'The Poplars,' a large business house erected by the Rev. T. Craven on the site of the great landslip. The other is the Wellesley high school for girls, on the opposite side of the lake above Smuggler's Rock; this is one of the most popular English girls' schools in the United Provinces and never has less than a hundred boarders. Besides these, the mission also owns the large Methodist English Church at the lower end of the lake; this was built after the landslip of 1880 by the Rev. J. Cheeny and is largely attended; it is capable of seating 500 persons. Then there is the Mission Sanitarium above the Mission house for the use of workers in the plains; and English parsonage close by. Altogether the mission owns property in Naini Tal with an aggregate assessed value of over Rs. 68,000.

As shown by the figures of the last census report the population of the Naini Tal district is mainly dependent on agriculture. The number of persons thus deriving a subsistence amounted to 197,217 or 63·3 per cent. of the whole. The

proportion is considerably lower than the provincial average and very much less than in the adjoining district of Almora, where it rises to 91·5 per cent. At the same time industrial population is not unusually large, amounting to 12·7 per cent. If to these figures be added the small commercial and professional populations, which together amount to 1·9 per cent., there remains 22·1 per cent. otherwise engaged. The bulk of this remainder consists of persons employed in general labour other than agricultural, and this accounts for 9·1 per cent.; while nearly four per cent. are engaged in personal services of various kinds and two per cent. in pasture and the care of animals. The remaining seven per cent. come under the heads of administration, transport and storage, and means of subsistence independent of any occupation, the last generally implying mendicancy. For practical purposes, the only occupations other than agricultural which are deserving of notice are those which are classed as industrial. These include the preparation of supply of articles of food and drink as well as all the various crafts and industries. There are no manufactures of any importance in the district. Some 7,600 persons are engaged in cotton-weaving and other cognate industries, which are chiefly carried on in the Kashipur tahsil; 2,400 persons are returned as working in iron and steel, and some 3,600 are workers in wood, cane and other forest produce. Further, it may be noted that a very considerable proportion of the industrial population is also partly dependent on agriculture. Outside the settlement of Naini Tal, and apart from the railway and other main lines of traffic along which a large carrying trade is maintained, the people of the district are almost wholly dependent on the natural products of the soil whether cultivated or of spontaneous growth.

The condition of the people presents some striking contrasts. In the hills the state of the peasantry has materially improved in every direction since the conquest of Kumaun. Cultivators are now numerous in the more highly tilled parts and good arable land is scarce. The development of Naini Tal and Rani-khet has brought about a great increase in the wealth of the hill people who have been thus provided with excellent markets

and also with abundant sources of labour. The great development of the Bhabar, too, has given most material advantages to the hillmen, who find cultivation in the lowland villages so profitable that they can afford to neglect their old lands in the hills. The assessment is everywhere very light, and at no time have the people suffered from the pressure of the revenue demand. Mr. Goudge, in his assessment report on the hill patts, states that the slight increase in the population during the last three years is the only bad sign to be detected. The people are very rich in cattle, and have abundant pasture both in the Bhabar and the hills, while they find a ready market for ghi, milk and *dahi* in the towns. The spread of potato cultivation has also largely contributed to their material prosperity since the last settlement. The increasing importance of the hill stations in Kumaun has affected the patts which lie near the rail and along the chief routes in a very perceptible manner. The number of roadside shops and small bazárs which have sprung up in recent years, as at Ranibagh, Ganja, Bhowali, Ramgarh and Khairna is ample evidence of this. The people themselves are losing the characteristics of the hillmen found beyond Almora. They are averse to, and above, carrying loads, and the coolie population for work in the forests and along the roads is largely imported from Almora and Garhwal. They have no need to earn money in the way their forefathers did. This increase of wealth has its dangers, for the hill-men are much given to gambling. Chauthan and Chhakhata have an evil name for this vice.

In the Tarai and Kashipur, on the other hand, there is a very different state of things. The serious deterioration of the Kashipur pargana of late years has had a universally admitted effect, and the condition of the people there, as will be seen from the separate article on that pargana, is often miserable in the extreme. In the Tarai, too, though the land is fertile and rents are light, nothing can overcome the terrible nature of the climate. In the east the Tharus and Bhuksas, who alone seem able to stand its effects, are generally in prosperous circumstances ; but this is the only bright feature in the state of the Tarai peasantry. The immigrants from the plains would no doubt be able to amass considerable wealth if they only had the time but unfortunately

few of them live to enjoy the fruits of their labour as their health almost invariably gives way after a short residence, and their condition is generally most unenviable. From the fact that they are frequently attracted away from the Tarai by the Rampur thekadars, whose villages are grain-rented, it would appear that they are here deterred from remaining, not only by the climate, but by the fixed cash rents and the constant interference of subordinate officials. The Bhuksas and the Tharus, and especially the latter, are often heavily indebted—a subject to which reference has already been made; but everything possible is done to keep these valuable tenants satisfied, for they are the mainstay of cultivation in parts of the Tarai in which no plainsman could possibly live.

The villages in the hill pattis present a neat appearance from a distance, but frequently this impression is entirely effaced on a closer examination by the filthy accumulations in and around the dwelling-houses. These are usually of two storeys, the lower being used for housing the cattle and the upper as a residence for the members of the family. In bazárs the lower rooms serve as shops. The upper storey has generally a verandah which may be open or closed. The walls are built of stone and the roof of slates. The houses are frequently built in rows and generally on a slope. The apartments of the houses are as a rule very low, dark and confined, and are ill-arranged for health or convenience, while outside the front enclosure in which the cattle are kept is often little better than a receptacle for manure. In the towns and villages immediately under the hills the houses resemble those of the upper pattis; but further south the hill cultivators of the Bhabar commonly reside in grass and wattled huts during the cold weather, the villages being enclosed in a thorn fence, with the huts at a considerable distance from each other. In the long settled villages of the Bhabar each tenant has his homestead on his field by himself, generally a substantial building with a small yard or garden, a grain-store and threshing-floor. The cattle are penned apart, near the village road or waste land. In the Tarai the ordinary mud hut of Rohilkhand is most common and is the universal habitation of the immigrants from the plains. Such

houses cost about seven rupees to construct, of which the grass roof accounts for more than half. These houses differ, however, very materially from those of the Tharus and Bhukasas, who build their dwelling-places on an entirely different system, possibly on account of their greater experience, for they attribute their immunity from fever largely to the nature of their habitations. The Tharu house is built so as to avoid damp as far as possible. In the first place the walls, instead of being of thick mud which becomes thoroughly saturated and takes a long time to dry, are of wattle with a very thin coating of mud, such a wall drying very rapidly after the cessation of rain. Secondly, the ends of the thatch instead of being trimmed off short are left long and irregular, the object obviously being that the rain water should not continually fall in one place and so form a regular ditch round the house, as is the case with the ordinary plains dwelling. Lastly, they are most particular about their drinking water: not only is it always covered, but it is kept in a separate shed at some distance from the house. In the plains brick houses are found in Kashipur and Jaspur alone.

Owing to the large number of immigrants and settlers from different parts of the provinces, the languages spoken in the district are somewhat varied.* By far the greater number of inhabitants are found in the Tarai and Bhabar, and most of these speak Western Hindi, the principal dialect used being Hindostani mixed with Braj and Kanaujia. In the hill patts the chief language used is the Kumauni form of Central Pahari, but Garhwali is spoken by the numerous coolies from Garhwāl. In the Census Report for 1901 an estimate was made of the proportion in which these languages are used, and according to this, 66 per cent. of the inhabitants speak Western Hindi and 30·6 per cent. speak Kumauni. Besides these 1,934 persons gave Garhwali as their language, while there were also 4,238 speakers of Nepali, Parbatia and Gurkhali, and 270 speakers of Bhotia, besides small numbers of persons using their languages. The Tharus and Bhukasas of the Tarai are frequently said to have a distinct dialect of their own; but apparently this is not the case,

* See *Hill Dialects of the Kumaun Division*, by Pandit Ganga Datt Upreti 1900

as they generally use ordinary Hindostani with some admixture of Kumaoni. The script in common use throughout the district is the Nagri and all the records are thus maintained. The Persian character is very little used except in the Kashipur pargana. There is no indigenous literature in the district, and no native newspapers are published in Naini Tal.

The different forms of tenures and proprietary rights in the hill pattis of Naini Tal differ somewhat in appellation and form from those of the plains districts. Throughout Kumaun from the conquest the maxim that the property in the soil rests with the State has never been forgotten. In former days the occupant landholders held their estates in hereditary and transferable property; but their tenures were never indefeasible, and as they were derived from grants made by the supreme power, so might they be abrogated by the grantor or his representative without even an allegation of default. The frequent exercise of this prerogative would no doubt have been highly unpopular; but in the neighbourhood of the capital and on the border such arbitrary transfers were not uncommon; and where a provision of land was made for services rendered, it was usually at the expense of existing rights. Land held in proprietary right in the hills is still termed *thāt*, and the proprietor is a *thātwān*, the word zamindar being restricted to the cultivator actually holding or occupying the land, whether a proprietor or tenant. Where the proprietors are, as is generally the case, a coparcenary body, they are known as *bissadars* and the tenure is usually called *bhāiṛiya-bhānt*, resembling the *bhaiyachara* tenure of the plains in which the proprietary right is in an extreme state of subdivision, each estate being shared among all the coparceners, although each holding is expressed in actual areas and not in fractional shares. The origin of such property is traced either to long-established hereditary occupancy, or to a grant from the State, or to purchase from some former proprietor. In the first case the owners are aboriginal hill tribes, as will be seen in discussing the chief proprietary castes. The second category comprises the descendants of immigrants from the plains, whose ancestors received grants of land in service tenure, which, however, differed from the *nankār* or *jāedad* tenures of the

southern districts in that it conveyed an actual property in the soil. Further, the Gurkhas used frequently to grant land in proprietary right to those who brought waste under cultivation—a practice followed by the British Government in the Bhabar.

In all such *hissadari* estates the place of the *málguzár* or *lambardár* of the plains is taken by a headman known as a *padhán*. In the days of the Chand rule this official had very much the same duties as at present: he collected the revenue, attended to the police duties of the village, represented the coparcenary body when necessary, and was in charge of all the *sayar* or miscellaneous produce. He frequently had a deputy known as a *kotál* and appointed by himself. In the event of a balance being due from the *padhán*, he might be liable to forfeit his office and emoluments, and these might be given to any person in the estate engaging to make good the balance. In all old villages a recorded portion of the *sír* land is enjoyed by the *padhán* rent-free as *haq padhánchári*, while in newly-settled villages the *padhán* makes as much as he can from the rents of the tenants-at-will, after satisfying the Government demand. Where *padhánchári* land existed in sufficient quantity, that was the only remuneration allowed; but where there was not enough or none at all, five per cent. on the revenue was allowed from the other *hissadars*. Under the old arrangements the *padháns* received a number of dues, such as fees on marriages, portions of every goat killed in the village, grain, *ghí* and the like. These dues were the cause of much litigation, and at Mr. Beckett's settlement they were commuted to a money payment of 25 per cent. on the revenue to the great relief of all. The *padhán* must be a shareholder in the village, and if possible a resident; when he lives in another village he appoints another sharer as his deputy, or if he be the sole proprietor he appoints a resident *khaikar* for the performance of police duties. There is no hereditary right to the office, but as a rule the son succeeds his father, unless incapable on account of youth or want of talent, in which case the sharers are called upon to appoint another *padhán* from amongst themselves. The *padhán* is removeable for inefficiency, malversation, or at the requisition of the majority of the co-sharers.

In the hill pattis there are two main forms of tenant right differing considerably from each other. In the first place there are the khaikars, who are something between under-proprietors and occupancy tenants, a comparatively small class in this district, who do not pay rent, but the Government demand and 25 per cent. in addition, which is known as *málikána*, and goes to the hissadars. These khaikars are usually of the same class as the actual proprietors and have the same tastes and the same standard of comfort. This tenure originated in those estates in which land was given in *thát* by the State, the former proprietors sinking to the level of tenants of the new grantee who was allowed by custom to take one-third of the cultivation into his own hands as *sír*. In the remainder of the estate, the right of cultivation remained with the original occupants, who were now termed khaikars and paid their rent at an invariable rate. Since the conquest the khaikar has by custom a hereditary right of occupancy at fixed rates, but cannot dispose of such right, though he may carry on his cultivation through a tenant-at-will. His rent cannot be increased during the currency of the settlement, and so long as he pays this he is safe from any interference. Khaikari rights are liable to subdivision by inheritance, and consequently khaikars are often compelled to cultivate other lands as ordinary tenants. Altogether about 16 per cent. of the land is held by tenants of this caste. The only tenants proper are sirtáns or tenants-at-will, and these are so few that they rarely, if ever, pay a competition rent, for the great bulk of the cultivation is carried on by the proprietors themselves. These sirtáns are either Doms holding land in lieu of service to the village community, or paying a share of the produce, or else they are hissadárs of one village cultivating in another and paying little more than the Government demand. The class includes those who in the earlier years of British rule were known as *habiyas* and were in reality domestic slaves. The sirtán has no permanent rights whatever and his holding is not entered in the record-of-rights.

In addition to the tenures already mentioned, reference must be made to a curious form which is confined to potato

cultivation. Mr. Goudge writes: "Most of the actual cultivators of this tuber come into the oak forests from congested centres of the Almora district, Salam in Chaugarkha, or pargana Phaldakot, and take leases from the co-sharers of the village for a term of years. Previous to the settlement of the potato tracts in 1896 they used to pay fairly large rents; but since then they have become known as *sajhis* or partners, paying a proportion of the crop, usually one-third over and above the Government demand which was fixed at Rs. 2 per acre. In some cases these *sajhis* did not pay anything to the proprietor, though now recorded as his tenants, and the patwari used to collect the potato rent direct from them. In the Government mahals (of Binaikdhura), where all the cultivators are men from other districts, Almora, or Doti in Nepal, they are recorded as *sirtáns* of Government, and the collection of rent or revenue is made under the system known as *khám*."

In many villages we find middlemen between the State and the proprietors, with a kind of superior right. Such persons were formerly known by different names in different parts of Kumaun; but in Naini Tal they are styled *thokdárs*. Such officers had formerly both duties and rights, and at one time played an important part in the revenue administration. Under the Gurkha rule the land assessed to revenue was assigned for the support of troops, and the collection was entrusted to the commandants of different regiments. The latter naturally could not remain in their assignments for any lengthy period, and consequently the details of assessment and collection were delegated to some prominent landholder as deputy, who was made responsible for the revenue. Such officials were not permanently appointed, and at first changed office frequently, but being almost always chosen from amongst the principal *padháns*, it was only natural that the office should develop a tendency to remain in one family. In consideration for the responsibility the *thokdár* received either a small portion of land free of revenue or a remission of revenue, and was also entitled to demand a small due or *nazarána* from each village in excess of the State demand, as well as trifling dues on marriages occurring within their circle. The power granted to the *thokdárs*

was soon abused by them : finding themselves uncontrolled, they manipulated the assessment as they pleased, and thus by ruining the padhāns enlarged their possessions enormously. The first blow struck against this usurpation was at the first triennial settlement of 1818, when the village proprietary body was admitted to engage : and in 1821 the thokdārs were expressly forbidden to interfere in the collection of revenue in any village not their own property. Mr. Traill transferred this duty to the padhāns, and the thokdārs were limited to interference in matters of police, receiving certain fixed fees in lieu of the former numerous dues. At the same time, the office was nominally continued to members of the families from which they had been selected, although they could be removed for misconduct or neglect. They were required to report offences and casualties, to search for stolen property and seize offenders, to take charge of unclaimed property in the case of a person dying without heirs, to collect coolies and supplies from the villages of their charge, and generally to assist the patwaris. In 1856 these duties were modified, and all police work was taken away from the thokdārs owing to their frequent habit of taking bribes and because their appointment tended to minimize the village responsibility for the prevention of crime. It was accordingly determined that the more important men should receive dues varying from six to ten per cent. on the revenue in those villages in which their right was ascertained at Mr. Batten's settlement and that three per cent. should be given to all whose names were in *thokdāri* leases if they were upheld amongst those who were descended from men in office at the conquest. This rule was followed by Mr. Beckett, and the dues were deducted from the revenue of the villages affected.

In the Bhabar tenures differ considerably in nature and assume five different forms. In the first place there are the directly-managed or *khām* villages, in which the tenure is practically *raiyatwari*, and which account for 436 out of a total of 516 villages into which the whole of the cultivated land is divided. Next come the old settled villages along the foot of the hills held on the same tenure as the hill villages : these consist both of villages which were settled before the British

conquest and have been held from time immemorial by bodies of hissadars under a padhán and also of those which were granted in proprietary right by Mr. Traill and Mr. Batten to any one who would cultivate them. Such villages occur in Chhakhata and Kotah only, and number 26 and 27 respectively. Thirdly, there are the 14 villages in Chilka which are held under a regular settlement in the ordinary bhaiyachara tenure of the plains, here known as *mustajiri*. These were transferred from Moradabad in 1860, together with eight others which formerly belonged to the Kashipur estate and which were taken under direct management. Fourthly, there are 34 deposited villages, four in Chaubhainsi, twenty in Chhakhata and ten in Kotah. These were at one time held as settled villages in which the settlers enjoyed proprietary rights which were later on relinquished to or deposited with Government. This relinquishment was due to the inability of the shareholders to cultivate fully the village area, and was only partial in its effects, for the proprietors retained a lien on the village in the shape of a *málíkána* allowance of ten per cent. on the collections. Lastly, there were till recently nine villages known as *muqaddam*, of which only one remains. These villages were those which were deposited subsequent to Mr. Roberts' settlement of 1890. They were managed directly by Government through the agency of a muqaddam or headman, who took the place of a sirgiroh and received a *málíkána* of $5\frac{1}{4}$ per cent. In the villages held on the hill tenure of settlement, the cultivated area in the possession of the padháns and headmen and the hissadárs or sharers is regularly assessed, while any waste land within the village boundaries that may be cultivated is treated as a *khám* mahal. Grazing and other rights are permitted within the demarcated boundaries. Khaikars or tenants with occupancy rights pay to the owners a *málíkána* of 18 pies in the rupee, corresponding to the 20 or 25 per cent. of the bills, the ordinary assessed rent for the land, together with nine pies as padhán's fee and the patwari cess of three per cent. on the rent or revenue. Their rights are heritable, but not transferable, except with the hissadars' permission, while the padháns and hissadárs have heritable and transferable rights over all their lands. In the directly managed villages Government is the landholder,

and rents are collected through the agency of a *padhān* or *sirgiroh*. With the exception that there is no *khaikari mālikāna* in such villages they differ little from the settled villages; only the *haq sirgirohi* here amounts to ten in place of five per cent., the reason being that the *padhān* has all the expense of settling cultivators in his village by making advances to them. The *patwari* rate of three per cent. is paid everywhere. Rents are fixed in all alike, and the same rates are used in fixing the amounts payable both by tenants and proprietors.

The different forms of tenancy in the Bhabar, generally speaking, resemble those of the hills. In all villages the tenants, whether *khaikars* or *sirtāns*, pay rent on a fixed principle, according to the settlement. In the case of new cultivation no rent is charged to settlers for the first two years, in order that they may clear the jungle and build their huts. Sir Henry Ramsay's rule was that for the third year four annas per *bigha* was charged, in the following year six annas, and then eight annas. The cultivators were induced to sow *kharif* crops by charging nothing for the land, and thus it became the rule to sow rice when they found what a profitable crop it was. At the present time the system is different for new lands. "When a plot of forest land is given out, which is not very often, rent is assessed in the second year and sometimes in the latter half of the first year, as the men now employ wood-cutters who do the felling and clearing for the purpose of burning and exporting charcoal for which they even pay the *sirgiroh* a small sum. Before, however, land is assigned, care has to be taken that water for irrigation can be laid on, and if so whether the supply in that part of our canals will admit of this extra service. Further, the assignee is bound down to bring new settlers from the hills and not to draw on existing villages for his cultivation. In fact a list is taken from him of the men he proposes to bring from the hills. Finally, he has to execute an agreement to cultivate the assigned area within a given period, subject on failure to ejection from the grant. In Sir Henry Ramsay's time advances of money used to be made from the treasury to men exploiting new areas or to the *sirgirohs* of backward villages, but he ceased

making these advances four or five years before his retirement. And herein the Bhabar cultivation differs from that of the Tarai, for whereas large sums are still expended in *tagávi* advances in the Tarai Government Estates, it is never necessary to do so in the Bhabar. The sirgiroh or headman of a village finds his own cultivators to whom he himself makes advances for purchase of plough-cattle, seed, &c., and receives lambardari fees at the rate of Rs. 10 per cent. on the cultivated area. Should the cultivation decline, owing to inattention or want of enterprise on part of a sirgiroh, he is brought to account and given grace for a year or two in which to work up his cultivation, and on failure to do so, he is eventually dismissed from his post and another approved man of the same or an adjacent village is installed in his place, preference always being given to a relative, if forthcoming, of the outgoing sirgiroh.”*

Owing to the changed condition of things, Mr. Roberts made several alterations in the system of assessing rents at his settlement of 1890, and it may be of interest to quote his words:† “Hitherto a rate was arbitrarily fixed per *bigha*, no classification of soil being made. The object in view was to have a low rental so as to enable capitalists to put money into the soil and to bring down tenants from the hills. The rate fixed was eight annas per *bigha*, and the same rate was fixed in settled as well as directly-managed villages. In the settled villages this rate was the rental of the khaikar, plus one anna and six pies per *bigha* for shareholder, nine pies per *bigha* padhán’s fee, and Rs. 3 per cent. patwari cess on the Government demand. All land held in tenancy other than khaikari was recorded as *khudkásht* of the proprietor, in whose share the land came, and was assessed at eight annas plus patwari and padhán’s fee. Both the *khudkásht* and khaikar lands are under-leased to subtenants called sirtáns, who are mere tenants-at-will. For these a higher rental obtains, either by fixed lump sum donation at time of entry on land, or by paying a higher rate of rental to proprietor or khaikar; written leases are seldom recorded, and the sirtán receives no mention in any Government papers. The method of cultivation,

* Mr. Hollingbery’s report, 1894, p 8

† *Ibid* p 9

too, is different; nearly all cultivation is by hired labour. In this form a proprietor probably himself manures a field, as all keep large herds of cattle; he then lets it out to a cultivating tenant, pays a lump sum down according to area of field, large or small, according to its position as regards water, and according to the amount it has been manured, distance from the jungle, &c. The cultivator so hiring in turn employs a *sajhi* or partner tenant: to this man he advances some Rs. 20 to Rs. 50; he is either a plainsman or low caste hillman or a Dotiyal from Nepal, and is paid as his wages one-third of the crop when ripe, the *sajhi* doing all the labour and watching the crop, while the real tenant is in the hills cultivating land there." Mr. Roberts, after dividing the Bhabar into circles, applied four rates according to the circumstances of the village; he fixed a ten-anna rate as the maximum, and took three lower rates of eight, six and four annas. In general, the upper villages pay a higher rate. For new fallow a rate of four annas was fixed, while for old fallow brought under cultivation and irrigated only water-rate is charged.

Land tenures in the Tarai differ considerably from those of the rest of the district. The majority of the villages are *khām*, or directly-managed, the rent being in cash at a *bighatnār* rate and collected with the aid of the padhān, whose position is analogous to that of the padhān or sirgiroh of the Bhabar. He receives ten per cent. of the collections and holds his land at a privileged rate. In some cases he is assisted by a hissadar known in the Tharu villages as the bhalamānus, whose position is merely that of a subordinate padhān. He also holds his own land at a reduced rate. Besides the *khām* villages, there are several *mustajiri* villages of different kinds. In some of these the tenures is practically zamindāri, as the *mustajirs* or farmers have full proprietary rights. Thus there are 56 villages of this nature in the Nanakmata pargana, held on a twenty years' settlement; and six villages in Rudarpur and Gadarpur, settled for five years only. On the other hand, there are three villages in Rudarpur and five in Bilheri in which there is no proprietary right: they were settled in 1846 and have never come under settlement since. Further, in the Mainajhand portion of

Nanakmata there are ten *mustajiri* villages held on a twenty years' settlement, in which the farmers have not full proprietary rights; and five villages which were formerly *khām*, but which have been recently leased for the period of this settlement.

In the Tarai tenants-at-will form the great bulk of the cultivators. In the directly-managed villages these tenants are allowed free grazing and are never dispossessed so long as they pay their rents, the holdings passing from father to son. The rents paid by them are those fixed by Mr. Boas at his revision of 1898. They are now paid in cash everywhere, having been gradually converted from grain-rents. Cash-rents have now for some years been the rule in most parts of the Tarai, except in the *mustajiri* villages, where rents in kind prevail, this system being more popular. In pargana Gadarpur the *kankut* system of appraisement existed in 21 villages in 1891, but two years later they had all been converted. In Kilpuri the *batai* system formerly prevailed, but in 1891 all the rents were in cash. In Bilheri and Nanakmata there was a curious system known as *sakim charida*, which has been described in the article on that pargana. In Bilheri there is an old custom of allowing one *bigha* of maize per plough free of rent in order to encourage the cultivation of this crop, and in the same pargana new settlers are allowed to till land for the first year on payment of cesses only. In determining the rent-rate no account was taken of the different soils, but it was assessed according to the locality, the proximity of the market, facilities of irrigation and the general circumstances of the village. The rate is seldom less than four annas per *bigha*, a lower rate having only been allowed in view of special circumstances. The average rate for the whole Tarai is five annas; it is nowhere higher than nine annas, and this is only paid by one village, Sultanpur in pargana Bazpur. The southern villages bordering on Rohilkhand usually pay the highest rates, while the Tharu and Bhuksa villages in the north are generally assessed at a uniform rate of four annas and six pies. At the revision the question of rents of fallow land, which had long been a matter of dispute, was at length settled. New land or land not cultivated

for ten years is given free for one year to new immigrants, and also to old tenants who have maintained their former cultivation. With regard to now fallow, the rule was made that it should generally be assessed if the tenant has retained possession; this rule, however, refers only to whole fallow. The practice of leaving a portion of the field fallow is very common in Tharu and Bhuksa villages, as these castes are continually shifting their cultivation from one part of the village to another, in order to save the soil from exhaustion. Such fallow is free of rent in Tharu villages, but in the Bhuksa estates it is paid for if it is less than half the field or less than twenty *bighas* in extent, while otherwise it is free.

On the British occupation of Kumaun it was found that considerable sums of money and tracts of land had been granted by the Chand Rajas and the Nepalese to temples and individuals, and these grants were made the subject of careful investigation by Mr. Traill. The lands and villages held in assignment to temples for religious purposes are known under the name of *gunth*, and only those assigned to individuals are styled *revenue-free*. The former are somewhat extensive in the hill patts. The revenues of Mahruri Bichhli, Mahruri Malli and the two Kutaulis are assigned in entirety to the temples of Badri Nath and Kedar Nath in Garhwál and are administered for the benefit of pilgrims and the people of Kumaun, the revenue being credited to the Sadabait Fund, of which an account will be found in the volume on Garhwál. Besides these, three villages of patti Bisjyula are assigned to the same purpose. Similarly, the village of Wari in Chaubhainsi belongs to the temple of Debidhura, two villages of Malli Rau to the Barahi temple; Kalsim in Bisaud Bichhla to the temple at Kapileswar in the Almora district; and part of the revenue of two villages in Chhakhata is assigned to the temple at Bhim Tal. Under the ordinary rule all extension of cultivation measured within these villages should also be treated as *gunth*, but in Mahruri and Kutauli there was a considerable amount of potato cultivation which came under summary assessment in 1896. At the last settlement this was incorporated with the villages and became a portion of the *gunth* mahals. The only revenue free estate in the hill patts is that of the Shastri

Brahmans of Sunoli in Siunara Malla of Almora. They hold part of Lohali and ten other villages in patti Dhaniyakot. The proprietor is called a *muâfidâr*; but as the people in possession are nearly all khaikars, he is really an assignee and only gets the Government revenue of Rs. 894 assessed on these villages. The present holders of the estate are Lila Dhar, Keshab Dat and Nand Ram. There are no revenue-free villages in the Bhabar, but in the Tarai there are some old grants to temples and individuals. One of these is Nanakmata, which belongs to the Sikh shrine there, as does also one village in Kilpuri. The remaining revenue-free areas consist of ancient grants made for religious purposes and forming parts of villages, chiefly in pargana Nanakmata.

It remains to deal with the chief proprietors of the district and the most important estates held by Europeans and others. The latter are in many cases not large, but deserve mention, because the tenure is often very different from that prevailing in ordinary villages.

The only great landowner of the district is the Raotela Raja of Kashipur. The family was founded by Lal Singh, the younger great-grandson of Raja Baz Bahadur Chand of Kumaun, and the brother of Mohan Singh who became Raja in 1777, but was killed the next year by Harak Deo Joshi, as narrated in Chapter V. In 1790 Lal Singh was driven out with his nephew, Mahendra Singh, by the Gurkhas and attempted to establish himself in Kilpuri, but was driven out thence by Amar Singh Thapa, the Nepalese General. He then claimed the protection of the Court of Oudh and received the pargana of Kilpuri in jagir; but owing to bad management the pargana was reduced to a swamp and was rendered so unhealthy that, on the petition of the family to the British Government, it was exchanged for the taluqa of Chachait, consisting of 17 villages in pargana Chauhahla of Bareilly; the Raja, however, still retaining the farming lease of Kilpuri. Partab Singh, the son of Mahendra Singh, sued Lal Singh for a share in Chachait, but the claim was dismissed, as also was his claim to Bazpur, on the ground that Lal Singh had held possession as the head of the family. Raja Guman Singh the son of Lal Singh succeeded his father n

1828. He resided principally in Rudarpur, where he occupied an earthen fort which he on one occasion defended successfully against the Pindari leader, Amir Khan, routing him with some loss. In 1835 he obtained a farming lease on favourable terms of Rudarpur and Gadarpur, binding himself to improve and extend the cultivation at a rate then fixed. He died in the following year and was succeeded by his minor son, Sheoraj Singh, and the property was managed by the Court of Wards till 1841. In 1848 he resigned the lease of the two parganas. He had settled in Kashipur in 1840, and there he built the present palace on a plot of land granted by the Pande zamindars. He subsequently acquired the proprietary right in some twenty villages in the Kashipur pargana. Raja Sheoraj Singh behaved with consistent loyalty during the mutiny and was liberally rewarded for his services. In 1866, on the recommendation of Mr. John Inglis, he was allowed to exchange Chashait for Barhapura, the forfeited estate of the Nawab of Afzalgarh in the Bijnor district, comprising 57,000 acres of cultivated land and forest free of revenue. He died in 1886 and was succeeded by his son, Raja Hari Raj Singh, who died in 1898. The present Raja, Udai Raj Singh, was born in 1880, and his property is still administered by the Court of Wards. The Raja owns, in addition to his extensive property in Bijnor and elsewhere, thirty villages in the Kashipur pargana, assessed to a revenue of Rs. 9,590 and two small villages in the hill pargana of Kotah assessed at Rs. 74. His uncle, Kunwar Kirat Singh, the son of Raja Sheoraj Singh, holds three villages in Kashipur; and Kunwar Bhopal Singh, the son of Karan Singh, has a property of six villages in the same pargana. Both have villages also in the Bijnor district, and the former in Moradabad as well; both are now under the management of the Court of Wards.

In the Kashipur pargana Chauhan Banko Lal represents the old Brahman zamindars of Kashipur and holds nine villages assessed to a revenue of Rs. 3,454. In the old Jaspur pargana there are one or two large zamindars: Paudit Kishan Sarup of Jaspur owns five small villages; Shor Singh, a Chauhan Rajput of Jaspur, owns six villages assessed at Rs. 1,920, and Debi Singh of Lalpur a member of the same clan, has two villages paying a revenue of

Rs. 1,234. In the Tarai parganas the only zamindar of note is the Pathan owner of Darao in pargana Rudarpur; but he only holds a single village. In the Bhabar there are a few wealthy landholders, but none of them have very extensive possessions. The chief are the Mahra thokdars of Mahrageon in the hill pargana of Chhakhata; Soban Singh holds four villages in the Chhakhata Bhabar, assessed at Rs. 1,565, and also exercises *thokdari* rights in ten villages of the hills. Ram Singh also, of Mahrageon, holds four villages in the Bhabar and is thokdar over eight villages in the hills. In the Kotah Bhabar the Brahmans of Patkot hold three villages; but the largest landowner is Sheoraj Singh, the present representative of the old Chakrayat family, which occupied a conspicuous position in the early development of the Bhabar. His property consists of three villages in Kotah Bhabar assessed at Rs. 3,360, as well as three villages in each of the parganas of Dhaniyakot and Kotah Pahar; he resides at Patolia in the Kotah Dún. The Brahmans of Budlakot on the road from Dechauri to Ratighat own a considerable amount of land both in the Bhabar and in the Dún. In the Chilkia Bhabar the chief landowners are the Brahmans of Jassaganja who own five villages; Prem Ballabh, a Belwal Brahman, who owns two villages in Chilkia and is also thokdar over nine villages in Kosyan Talla, and has his residence at Amel on the Kosi; and the Negi family of Gohra. There are many wealthy families in the hills and in the Bhabar who hold jointly large areas of land, but such coparcenary bodies hardly come under the category of zamindars; the *málguzár* for the time being often pays a considerable revenue, but he is merely a representative of a very large body of sharers. The largest of these estates in the hills is that of Babiari, which comprises seventeen out of 22 villages that constitute the patti of Chhabbis Dumaula; the property belongs to a clan known as Sambhal, and in old times they had a small independent chieftainship in the vicinity of Malwa Tal. Another important estate of the same nature is that of Sarna in pargana Mahrui; the owners have a large area under potatoes in the hills and also pay about Rs 4000 revenue in the Bhabar. Other wealthy landowning clans are the Sauns of Agar the Luls of Changarh,

and the Nayaks of Rangarh, who hold some of the best land in the neighbourhood of Haldwani.

Very few of the Naini Tal thokdars are people of much importance. The chief families are those of Mahragaon, of whom Soban Singh and Ram Singh have been already mentioned; there is a third member of this clan at Mahragaon, Lachham Singh, who exercises *thokdari* rights in one village only. Other Mahra thokdars are those of Doha in Kotah Talla, of Dhankot and Sukoli in Chauthan, both of whom reside in the Almora district; Harak Singh of Pipalkhand in Almora, who also exercises his rights in Chauthan over five villages, and the two thokdars of Tana in Almora, whose dues on villages in Dhaniyakot are paid direct from the treasury. After the Mahras come the Boras and Kairas, who colonized Borarau and Kairarau in Almora. The former have six thokdars, the chief of whom is Deb Singh of Sunkota, who holds rights in 13 villages of Dhyaniarau. Of the others, Ratan Singh of Belwakhana has eight villages in Chhakhata; Dhan Singh of Paitna eight villages in Dhyaniaran, and Harak Singh of Kachilkot five villages in the same pargana; while the other two live at Chonda in Almora, and exercise rights in sixteen villages of Chaugarh and Chaubhainsi. There is but one Kaira thokdar, Nain Singh of Kairagaon, whose rights extend over fifteen villages in Bisjyula and Malli Rau. The remaining thokdars are for the most part of little importance. Mention has been made in the preceding paragraph of the Belwals of Amel. The Bhelia thokdar of Kurpakha holds sway over thirteen villages of Kotah Malla. Bishan Singh, Panor, of Panoragaon in Dhaniyakot has fourteen villages in that patti and Simalkha. The two Bisht thokdars of Sonagaon hold nine villages in Chhakhata; and Deb Singh, Haldonia, of Haldyani is thokdar over nine villages of Chauthan. The Chakals of Mallakot have between them twenty villages of Dhaniyakot. Harak Singh, Jina, of Simalkha, exercises rights in seven villages. The Kahala thokdar of Nanghar has eight villages in Chauthan and Uchakot, and Prem Singh, Sona, of Jalna Bhagoli four villages in Kotah Talla which completes the list of the real thokdars of this district. There are three others who belong to Almora, but who

receive dues from a few villages of Naini Tal. These are Tilok Singh, Mahata and Deb Singh, Kulyal, both of Chonda in Almora, who exercise *thokdari* rights in eleven and six villages respectively of Chaugarh; and Prem Singh, Kumain, of Silangi in Almora is the *thokdar* of four villages in Chauthan.

Lastly, mention may be made of the few estates held by Europeans in fee simple or otherwise. The fee-simple estates are four in number, two of them being at Bhowali, a third at Bhim Tal, and the last being known as Capanacusha Castle above Bhowali. These holdings have neither been measured nor assessed, as they are exempted by the deeds under which they were acquired from all taxes on the proceeds of the land. There is one estate, that of Mr. Deriaz, at Ramgarh, which appears to have been a grant under the Waste Land Rules; it was not assessed by Mr. Beckett; but as the prescribed 25 years had elapsed at the last settlement the property was assessed to revenue and a record-of-rights drawn up. Many years ago a large area was acquired from the villagers out of the village of Jeolikot below the Brewery, including some forest, with the object of starting a tea plantation. This has now been divided into four separate estates, of which one is held by the Roman Catholic Mission, two are known as Vorgomont Farm, and the fourth, as Douglasdale, now the property of a Rani of Nepal. These are assessed at the usual prevailing rates, and have been properly demarcated. There are three *nayabad* grants held by Europeans in the district. That known as Ghorakhál in Mahruri Talli, the property of General Wheeler, has expanded into one of the finest gardens in Kumaun from an original grant assessed at two rupees. The Gagar or Snow View estate at Ramgarh belongs to Mr. Seers; and Riunsi Thok in Agar belongs to Mr. Thelwall. These have all been assessed as ordinary mahals. There is a certain amount of land held by Europeans as ordinary co-sharers notably General Wheeler in Shamkhet of Mahruri Talli and two villages of Chhakhata; the Naini Tal Brewery Company, and one or two others.

CHAPTER IV.

REVENUE AND ADMINISTRATION.

PRIOR to the year 1891 the Naini Tal district, as now constituted, did not exist. The hill portion together with the sub-montane tract known as the Bhabar formed part of the great district of Kumaun, with headquarters at Almora and in the charge of an officer who was styled Senior Assistant Commissioner. The Tarai parganas and Kashipur formed a separate district and was in charge of the Superintendent of the Tarai. Naini Tal, or the Bhabar tahsil as it was sometimes called, was in the charge of an Assistant Commissioner. The object aimed at in the formation of the present district was briefly to place in charge of one officer the large state properties in the Tarai and Bhabar; to retain in one district, and bring under the more direct supervision of the District Officer, the Kumaun Bhabar and those hill pattis which furnished the Bhabar with its cultivators; to bring Naini Tal under the immediate control of the Magistrate of the district by making it a separate headquarters; and lastly to reduce the size of the Kumaun district, so as to make its administration more amenable to the personal control and supervision of the District Officer. With this end in view, effect was given on the 15th of October, 1891, to the orders under which the two districts of Almora and Naini Tal as now constituted were defined. The old district of Kumaun, after the transfer of certain areas, was thenceforth called the Almora district, with headquarters at Almora, and the area transferred from the Kumaun district together with the Bhabar and the Tarai parganas was made into the single district of Naini Tal. The officers in chief executive and magisterial charge of the two newly-formed districts were designated Deputy Commissioners.

The area transferred from Kumaun consisted of six parganas—Chhakhata, Kotah, Dhamyakot Ramgarh, Kutauli,

Mahruri and Dhyaniraul. These, however, were not all handed over in their entirety. The patti of Mahruri Dolphat of the Mahruri pargana, as well as eleven villages of Mahruri Malli, and the patti of Talli Rau in Dhyaniraul were retained in Almora. At the same time two pattis of pargana Phaldakot, known as Kosyan Malla and Talla, were added to the pargana of Dhaniyakot, while Bisaul Talla and Bichhla were given to Kutauli from Baramandal. In the year 1893 an Assistant Commissioner on the staff of the Almora district and a Deputy Collector from Naini Tal went over the whole of the boundary of the district, and in respect of the northern border they reported that it should be amended by adopting a much shorter, more natural, and better defined boundary than that which hitherto existed. On this recommendation and with this object in view the exchange of several villages was sanctioned. Three villages were taken from patti Mahruri Malli of Naini Tal and included in Malli Bisaul of Almora, while Nayeli was taken from Malla Bisaul and added to Mahruri Bichhli; Lahni was taken from Talla Salan and included in Chaubhainsi, and Wara was added to the same patti, though taken from patti Chalsi of the Almora district. The result of this exchange was a reduction of eighteen square miles in the area of the Naini Tal district, with an addition of five persons to the population and an increase of sixteen rupees to the revenue.

The next territorial transfer occurred in the year 1896, when the eastern portion of the Bhabar, known as Tallades or the Tanakpur circle, was transferred to the Almora district. The reason for the change was that Tallades, being on the banks of the Sarda river, and cut off from the rest of the Bhabar by some thirty miles of forest, was more easily accessible to the Deputy Collector of the Almora district, who was stationed at Champawat, than to the Deputy Collector who was in charge of the Naini Tal Bhabar, who would have to pass through a wide extent of forest to reach it from Chorgallia, the nearest circle of his charge. Another reason was that the circle adjoins the Kali Kumaun pargana of Almora and the cultivators of that pargana come down to Tanakpur in the winter so that by the transfer they would belong to a single district throughout

the year; also that if a passable road was made in the hills the circle would be easier of access from Champawat and Lohughat, with or through which there was at that time a considerable trade in the produce of Kumaun and Tibet, while under no circumstances could it be easily approached by the people of any pargana except Kali Kumaun. In making the transfer of this circle it was agreed that the Jagbura should be the natural southern boundary, and in consequence a small triangular area of the Bilheri pargana in the Tarai was also transferred to the Almora district. The reason for adopting this boundary was that the whole of the arable land to the north of the Jagbura stream could be irrigated from the Barmdeo Canal in the Tanakpur circle. The tract was originally made over to the Tarai for grazing purposes and on its transfer to Tanakpur was returned as waste. The result of this exchange was that Naini Tal lost 4,813 acres in area, 5,367 persons in population, and Rs. 354 in land revenue.

The subdivisions of the Naini Tal district, as it now exists, are as follows. The hills form a single tahsíl with headquarters at Naini Tal. In this tahsíl there are seven parganas divided into 24 pattis as shown in the map and in the pargana articles. The pattis or *thoks* forming the subdivision of parganas do not always represent the similar divisions of the same name existing under the native governments. In former times it was the practice to remunerate the chief offices of the estate and the thokdars or commanders of the forces in the field by assigning for their support the revenue of various villages which were often in different parts of the pargana. So, too, under the Gurkhas all villages were classed together which had the same kamin or thokdar. A remarkable instance of this arrangement was patti Mahruri, which was held rent-free on condition that the inhabitants supplied carriers for ammunition in time of war. This artificial arrangement was found so highly inconvenient for revenue and police purposes that it was abandoned in 1821, and the natural subdivisions were restored. At that time the smaller parganas were also absorbed as pattis of the larger and thus Agar Ramgarh and C ta were all made into the single pargana of Chhakhata,

Dhaniyakot, Uchakot, Simalkha and Chauthan were merged in Dhaniyakot; and Dhyaniiran and Chaubhainsi were formed into a single pargana. Further changes were carried out at Mr. Beckett's settlement between 1863 and 1873, which resulted in the subdivision of the area into pattis and parganas as it now exists, excepting the more recent changes already referred to.

Below the hills lies the Bhabar, which consists of the pattis of Bhabar Chaubhainsi to the east, Bhabar Chhakhata in the centre, Bhabar Kotah and Chilkia to the west. The Bhabar is in every way distinct from the hill pattis, as it forms an estate managed directly by Government in which the state is with a few exceptions the actual landlord; it is in the charge of the tahsildar of Haldwani and the peshkar of Ramnagar, with a naib-peshkar at Kaladbungi. Below the Bhabar is the Tarai, which is administered in a manner similar to that of the Bhabar, and is in the charge of the tahsildar of Kichha. It is composed of six parganas, the names of which are, beginning from the west, Bazpur, Gadarpur, Rudarpur, Kilpuri, Nanakmata and Bilheri. These form five peshkars, Nanakmata and Kilpuri are united to form a single charge with headquarters at Sitarganj, while the peshkar of Bilheri resides at Khatima, and of Rudarpur at Kichha. Lastly, in the south-west corner of the district there is the detached tahsil and pargana of Kashipur which forms a separate subdivision of the district in the charge of its own sub-divisional officer who resides at Kashipur, and is assisted by a peshkar.

The administration of the Naini Tal district is in fact as varied in character as its physical configuration. The whole is in the charge of the Deputy Commissioner, subject to the control of the Commissioner of Kumaun. The account of the development of the existing form of administration belongs to the following chapter, where it will be dealt with in the history of the district after the introduction of British rule. The whole as regards criminal civil and revenue courts and police, is administered under the Kumaun rules of 1894.* These rules differ considerably from those in vogue in the plains districts and call for some special mention.

* Not Session No 628/VII. 1893, dated 27th June 1894

In order to explain the origin of the existing state of things, the history of the criminal administration of the district may be briefly traced. Regulation X of 1817 was passed to give criminal jurisdiction to the Kumaun officers in all cases except murder, homicide, robbery, treason and other similar offences, and for the trial of these a Commissioner was to be appointed by the Governor-General in Council. It is noteworthy that crimes of this kind were so rare that it was not found necessary to invest any officers with powers of the Commissioner under this Regulation. In 1828 the province of Kumaun was placed in the Bareilly district for the purpose of criminal trials, and from that time commitments appear to have been made to the Bareilly court from Kumaun. This Regulation was repealed by Act X of 1838, which affirmed the control and supervision of the court of Nizamat Adalat for the criminal courts of Kumaun. Rules were also framed under this Act for the administration of justice in criminal cases; but these were superseded by the Criminal Procedure Code, which rules the practice of all courts to the present day. At the present time, for the purposes of criminal justice, the High Court is that of Allahabad, the Sessions Court is that of the Commissioner, while the Deputy Commissioner is the District Magistrate. Subordinate to the latter there is usually a full-powered Assistant Magistrate, and two Deputy Collectors exercising first class powers and stationed at Naini Tal and Kashipur. In addition to these, there are the tahsildars of Kichha and Haldwani and the peshkars or naib tahsildars of Naini Tal,*Kashipur and Ramnagar, who exercise the powers of a magistrate of the third class. The honorary magistrates comprise the Naini Tal bench of five magistrates, exercising second class powers collectively and those of the second and third class individually; and Maulvi Abdul Karim Khan, who has second class powers within the limits of the police circles of Bazpur, Gadarpur and Rudarpur in the Tarai.

The whole of the arrangements for the administration of civil justice originated with Mr. Traill. For a series of years only one court the Commissioner's, existed in the province for the cognizance and adjudication of civil claims. In 1820

Mr. Traill on his own authority introduced an eight-anna stamp into civil proceedings and adopted a short and simple procedure. On the plaint being admitted, a notice was given to the suitor to be served by himself on the defendant—a practice which was found in 75 per cent. of the cases to lead to a private settlement of the claim. Parties were allowed to plead their own cause and no licensed law agents were allowed; but parties who were not able to attend were permitted to appoint any person as their agent—a regulation which precluded all vexatious litigation and prevented unnecessary delay in the proceedings. Under Act X of 1838 Kumaun was separated from Garhwal, and it was provided that in each district there should be one Senior Assistant, one Sadr Amin, and one Munsif, all of whom had power to hear civil suits. In 1855 revised rules for the guidance of the courts were introduced and with some modifications continue in force to the present day.* The Assam rules, which had been introduced on Mr. Bird's recommendation, were superseded in 1863 by the Jhānsi rules, and validity was given to their extension to Kumaun by section 2 of Act XXIV of 1864. Section 4 of the same Act distinctly ruled that the proceedings in all civil suits in Kumaun and Garhwal should be regulated by the Code of Civil Procedure. No instructions were, however, issued regarding other matters, and the courts follow the ancient usage in all cases for which there exists no special provision in the Procedure Code. Similarly rules for the service of process are based on the lines laid down by Mr. Traill; for Act XI of 1863 was not extended to Kumaun. Under the present Kumaun rules the Commissioner is himself the High Court, save as regards the Indian Succession Act, in which case he acts as the District Judge and appeals lie to the High Court of Allahabad. The Deputy Commissioner is ordinarily the District Judge, with the same exception; Assistant Commissioners of the first-class have civil powers in all suits of which the value does not exceed Rs. 5,000; Assistants of the second class have similar power in suits up to Rs. 500, and tahsildars up to Rs. 100. Similar arrangements are in force regarding the revenue courts of the district.

* G. O. No 4065 dated 6th October 1855

The subordinate officers of Government stand in a different position in the hill pattis of this district from that which they hold in the plains. There are, indeed, qanungos and patwaris, but their duties are very different from those exercised by similar officers elsewhere. The staff in Naini Tal consists of the supervisor and the superintendent of patwaris, whose position is somewhat similar. The duties of both qanungos and patwaris in the hills are relics of former administrations. Under the Gurkhas the qanungos were known as daftaris, and they performed duties corresponding to those of the tahsildars of the plains, collecting the revenue, supervising the police, and preparing and maintaining the revenue accounts and records. They were formerly remunerated by lands held in service tenure and also received half an anna in the rupee on the revenue collected. These lands were resumed, and assessed in 1819, and a monthly allowance of Rs. 25 was granted instead to each qanungo. In 1829, the qanungos were invested with civil powers, but they were withdrawn ten years later. At present their duties include the investigation of criminal cases as well as the supervision of the patwaris.

Similarly the patwaris in the hill pattis occupy a peculiar position. They were first established by Mr. Traill in 1819, and under his direction they took up the duties formerly entrusted to the likhwárs, who were the deputies of the old qanungos. The duties of the patwaris are of a very miscellaneous character. They not only collect the revenue and maintain the records, but they also have important duties as police officers, while they further have to measure land, execute decrees of the civil court for possession, see to the repair of local roads, arrange for supplies and coolies, and report regularly to the head-office. Prior to the settlement of 1863 the patwaris received pay at the rate of five rupees a month; this was raised to ten rupees by Mr. Beckett and at the present time their salary is fifteen rupees. The hill pattis are divided into ten patwaris' circles, which are arranged for local convenience without regard to the fiscal subdivisions. There is one patwari each for the pattis of Chhakhata and Kotah Malla. Kotah Talla is united with Kosyan Talla and Kosyan Malla with Chauthan,

each forming one circle. The Ramgarh pargana with patti Mahruri Talli form a single circle, while the rest of the Mahruri pargana constitutes another. The Kutauli pargana forms one circle, as also do the remaining pattis of Dhaniyskot. Dhyaniarau is divided into two, one consisting of the northern pattis of Malli Rau and Chaubhainsi, and the second of the three southern subdivisions. Reference has already been made to the minor village officials in dealing with tenures in the preceding chapter. In the Tarai and Bhabar the arrangement is somewhat different. Here the patwaris correspond more closely to their brethren of the plains, but also perform the functions of subordinate officials of the Government estate in regard to the distribution of water supply, as well as several other matters of less importance.

The fiscal history of the district is very difficult to trace, not only on account of the former union of the hill pattis and the Bhabar with the old district of Kumaun, but also because the hill tracts, the Bhabar, the Tarai, and to a less degree the Kashipur pargana, have all been administered separately since the introduction of British rule. In this district we are little concerned with the fiscal history of Kumaun during the rule of the Chand Rajas; the hill pattis of Naini Tal were then very sparsely populated and cultivation had not encroached to any great degree on the primeval forests. For an account of the Chand administration, reference should be made to the volume on Almora.

There are in fact no actual records of any kind referring to the hill pattis of Naini Tal before the days of the Nepalese invasion. We happen to know the actual assessment made by the Gurkhas owing to the fact that their revenue demand was taken at the British conquest as a temporary basis for assessment. In 1815 the Hon'ble E. Gardner made the first settlement of Kumaun, and formed the assessment from the actual receipts of the Gurkhas for the year 1812, as, owing to the destruction of records and the ravages caused by the war, it was impossible to obtain any more reliable data on which a calculation could be made. The revenue demand for the hill pattis of Naini Tal amounted in all to Rs. 15,887. The Gurkhas had, in addition to the revenue, levied a number of dues and cesses, such as *ana*, *ghikar*, *tandkar* or a tax on looms, customs, and transit

duties, and duties on mines and forest produce. Most of these were at first maintained by the British Government, with the exception of the duty on the sale of children, which was at once abolished. In 1818, however, owing to the vexatious nature of these imposts, Mr. Traill recommended their abolition, and the only duties retained were those on forest produce, which formed the nucleus of what subsequently became the revenue of the Forest Department.

The second settlement of the hill pattis was conducted by Mr. Traill in 1817, and made with the padhāns for their respective villages. This mode of collection was new to the people, and as the power and responsibility of the padhāns remained to be ascertained, the arrangement was only partially introduced and the leases were restricted to one year. The chief difference in this settlement from the former was that at the conquest the assessment was made by whole parganas or pattis: hence, on the formation of a village settlement, it became necessary to fix the land revenue according to the actual produce, and therefore recourse was had to the village landholders themselves. The gross demand on account of each patti was communicated to the whole body and the landholders were directed to fix the detailed assessment themselves. This second settlement was almost as light as the first, but the exact figures for this district are not available, as we merely have the assessments of parganas, the area and boundaries of which have been subsequently altered. The same remark applies to the third settlement of 1818, also carried out by Mr. Traill. He imposed a considerable enhancement, but still considered the demand extremely light. The mode of settlement was the same as before, and the general fairness of the arrangement was shown by the fact that the entire revenue of the first two settlements in which the village system had been tried was realized without having recourse in any instance to coercive processes. This settlement was made for three years.

In 1820 the second triennial settlement was made by Mr. Traill. It was found that the smaller landholders in general were unprepared to engage for a long term of years owing to the wandering disposition of the tenantry who continually changed

from one village to another without any adequate reason. This habit had its origin in the oppressive system of the Gurkha rule and had ample field for its exercise in the great excess of arable land when compared with the population. For this reason the Commissioner's recommendation, that the settlement should be for three years only, was accepted by Government. The hill patts of the Naini Tal district were assessed at Rs. 17,334. The enhancement was very light and Mr. Traill calculated that the revenue demand did not amount to one-third of the gross produce. In the following year he pointed out the great improvement that had taken place in the condition of Kumaun. The value of land had largely increased, the quantity of waste newly brought under cultivation was far in excess of any previous year, the people were beginning to build substantial houses for themselves, and great numbers of the smaller landholders themselves now carried on the trade in the produce of the hills, which was formerly monopolized by a few wealthy families or Banias.

At the expiration of this settlement in 1823 the difficulty caused by the habit of migrating from one village to another on the part of the cultivators had not ceased, and consequently the fifth settlement of Kumaun was only made for five years. The report on this settlement gives no details and merely states that the general result of the revision was an increase of about 12 per cent. In order to save time in the future, it was suggested that the settlement should be extended for a second period of five years from 1828 in those parganas where the cultivation was advanced and where the landholders did not object. Sanction was accordingly given to a settlement for ten years in the parganas of Ramgarh and Dhaniyakot, while for the rest of the district it was directed that a revision and resettlement for four years should be made after the expiry of the first quinquennial settlement; and this revision took place in 1829. It was then found that the greatest improvement had occurred in those parganas of Kumaun which bordered on the Bhabar, that is to say those of the Naini Tal district, owing to the number of new villages assessed there. In Kotah and Chhakhata there was a great visible improvement owing to the number of villages

reclaimed in the Bhabar and Tarai by the inhabitants of the hill patts who then, as now, annually migrated to the south.

The seventh settlement was made in 1832 for those parganas in which agreements for four years only were taken. In August of that year the crops were badly damaged by flights of locusts, and in the following year, when the leases for Dhaniyakot and Ramgarh fell in, a deficiency in the rainfall caused some injury to the kharif crops. Although the damage was not great, the landholders had become alarmed and were averse to enter into any lengthy engagement. Consequently Mr. Traill proposed a settlement for five years only, at a very moderate increase. The Board of Revenue recommended that this settlement should be extended for twenty years, but the Government refused to sanction this arrangement without having the opinion of Mr. Traill, who was opposed to the suggestion, as also was his successor, Colonel Gowan. Eventually a compromise was effected and the settlement was renewed for a further term of five years.

The ninth settlement of Kumaun is of much more importance and is still remembered by the people. It was made by Mr. Batten during the years from 1842—46 and was for twenty years. This was the first partial attempt to measure and examine the capabilities of the land and form a record-of-rights. The latter contained a complete description of the rights of every occupant, the past history of the assessments, the boundary arrangements, the engagement paper of the inhabitants as regards the remuneration of the padhán and the collections made under the heads of *thokdári*, *hissadári* and other dues, and also binding themselves to conform with certain rules in regard to the public service; the *phardphamt*, showing the name of the padhán, the distribution of the revenue, and the division of the non-proprietary tenantry amongst those recorded as proprietors and the names and liabilities of tenants-at-will and other cultivators whenever discoverable. Further, there was a memorandum summarizing the whole, and the petitions presented, depositions taken, and orders passed by the Settlement Court formed separate files in the proceedings. In making his assessment Mr. Batten followed the procedure he had already adopted in Garhwal: "the only repetition that appears necessary is that the remuneration of

padmans in land, money or dues was settled by the mutual agreement of the parties, and failing that, by decision of arbitrators, and that the allotment of *hag-padhani* land recorded in the papers represents actual facts and not the nominal figures of old records." There was a attempt at the actual demarcation of waste lands within the village boundaries save when there was a dispute owing to the existence of the rule to lease newly-broken up lands to the nearest village, or to offer them to the landholders of such villages first rather than to strangers. He added: "No great increase of the land revenue under the present system can be expected. In opposition to the prevailing opinion, Kumaon is rather over-assessed than under-assessed; that is, a large portion of the rent of the land in the old occupied tracts is now taken by the State as landlord, and though no actual hardship is experienced, though pauperism is unknown, though a hill labourer is always better lodged and often better fed and clothed than his fellow of the plains, and though a general feeling of content and loyalty exists, still one can perceive in the present state of affairs no elements of increasing wealth of which revenue will be the future sign and expression." This was written before the hill sanitarium of Naini Tal and Ranikhet had a population capable of consuming not only the existing surplus produce, but all that the lands capable of cultivation could yield. The result of Mr. Batten's settlement was that the present district of Naini Tal was assessed at a revenue of Rs. 23,312, the detailed distribution of which will be seen in the appendix.*

Mr.
Beckett.

The tenth settlement of the hill patts was effected by Mr. Beckett between 1863 and 1873, and was confirmed for a period of thirty years. Unfortunately Mr. Beckett was obliged by ill health to proceed on furlough before writing a report, so that we have nothing but two ponderous volumes of statistics and a short introduction by Sir Henry Ramsay to give us an account of this important settlement. The preliminary work consisted of a survey, which was very necessary as there was no actual measurement of the land beyond the rough estimate made by Mr. Traill in 1823. Mr. Batten's record-of-rights

was of considerable value, but inaccurate owing to the many instances in which numbers of the sharers were omitted, this being one result of its preparation by the people themselves, whose object was to conceal their numbers and make the village appear as poor as possible. During the currency of Mr. Batten's settlement, however, the villagers became accustomed to the idea that an accurate record of the capabilities of the land formed the best basis for a contract between them and those from whom they held and between their village and Government, and consequently little difficulty was experienced in carrying out the survey. The directions were that all terraced land was to be measured unless it had relapsed into forest; but forest clearings and *khils* or slopes cultivated only after the lapse of eight or ten years were not to be measured; each enclosure or field was to be measured separately, and all land classified as either *talāon*, first or second class *uparāon*, or *yrān* or casual cultivation. Actually, however, all the cultivable area was classified as either permanent cultivation, casual cultivation, or waste. The measurement was only approximate, as the rough-and-ready method was employed of merely multiplying the average length and breadth of the fields; but the result was of the greatest value and far superior to anything in existence as a basis for assessment.

Mr. Beckett began the actual work of assessment by bringing all the land to one common standard, and for this purpose selected second-class *uparāon* as the soil unit; each of the other three classes was brought to this standard by trebling the irrigated, adding one-half to the first class dry, and reducing the casual cultivation by one-half. He then proceeded, in the absence of rent-rolls, to estimate the produce of each class of soil in order to determine the rates to be applied to the ascertained areas, and having done so, to reduce them all to the common factor, adding one-half for a second crop, as land is usually left fallow every second year. Generally speaking, an average rate of one rupee per *bisi* was adopted for the soil unit. He had also to take other considerations into account, such as the wealth brought to the district by the tea-planters and the public works at Ramlhet, the advance in the price of grain and the increase

in population, the last being perhaps the most important. In addition to this he personally inspected each village and examined its past history; the settlement involving an amount of care and labour that had never hitherto been expended on the hills. The result was that the revenue was fixed at Rs. 34,783, involving an enhancement of Rs. 11,411 or 49 per cent. on Mr. Batten's assessment. This was considered severe, but the event proved the contrary. Cultivation and population had increased to a remarkable extent, and the assessment was only made on the actual cultivated area and all waste was omitted. The revenue was easily collected, and the only balances occurred in 1877 and 1878, when there was famine throughout Upper India, and in 1880 on account of the floods of that year.

During the currency of this settlement there was a large further increase of the cultivated area. The people had liberty to use all the waste land and to extend their cultivation into the unmeasured forest land without any increase in the revenue, except in the immediate neighbourhood of Naini Tal, where the preservation of the timber and fuel supply was of great importance. The rule was that all such new cultivation or *anyabad* land, as it is called, should remain unassessed till the expiry of the settlement, and this principle was observed with one important exception. Enormous areas of oak forest were cut down and cleared in the parganas of Ramgarh, Mahauri and Dhaniyakot, and used for potato cultivation. The income thus derived was so great that it was determined to take all the potato mahals under direct management and to levy a rent on the cultivators, this course being rendered necessary by the nature of the case, for the cultivators after raising three crops would abandon the fields and repeat the process elsewhere. Moreover, the consequent rapid denudation of the hillsides in this manner was one of the chief causes of the constitution of the district protected forests in the beginning of 1896. Consequently, while nothing was done in the case of lawful *anyabad* cultivation, in the case of extensions of ordinary cultivation, the potato fields, which were often cleared in a most reckless manner were made to pay rent. In 1895 the system of direct management was dropped, and the potato fields were regularly

assessed. In September of that year *nayábad* leases were given for the term of the settlement at the rate of Rs. 2 per acre for the potato fields of Binaik-dhura, in place of the former system of annually assessing rent on the area actually sown. Elsewhere, similar leases were given till the expiry of the settlement on the basis of the actual possession and existing cultivation only. Agreements were taken primarily from the person who first broke up the land, or failing him, with the person in possession, or lastly with the subtenant, at the rate of Rs. 2 per acre annually for three years and then at the same rate as that paid for similar land in the neighbourhood, with a minimum of eight annas. Altogether the area for which *nayábad* leases were granted during the currency of Mr. Beckett's settlement was 3,770 acres, assessed at Rs. 6,829, which brought the expiring demand, inclusive of nominal assessments on revenue-free and assigned land, to Rs. 41,699.

The district again came under settlement on the 28th of May 1900, and the work was entrusted to Mr. J. E. Goudge, who was also in charge of the settlement of Almora. The work was preceded, and to a great extent simplified, by a professional survey, which resulted in a recorded increase of 37.44 per cent. in the measured area. At the same time, no land was measured which had been allowed to relapse into forest or which had been long uncultivated, and this rule combined with the neglect of the villagers themselves and their absence in the Bhabar caused a considerable area of land assessed and measured by Mr. Beckett to be omitted from the new maps. Consequently the villagers were allowed to continue the cultivation of such lands, but on the express understanding that they should be assessed to revenue when cultivated. In the actual assessment Mr. Goudge followed the lines of the former settlement, the ultimate basis being as before the soil unit of a *bisi* of second class *uparāon* land. Thus the real work consisted in judging whether the old incidence was suitable or not. For assessing purposes the patts were divided into ten groups, these taking the place of assessment circles. The greatest difficulty lay in the treatment of old fallow, and in deciding how much should be valued and at what rates. Mr. Goudge adopted no fixed rule in this respect, but

considered local conditions, with the result that more than half of the fallow land was reassessed. The potato fields were left as before, when used for this crop, but in other cases were treated as natural extensions of the villages: the revenue for potato land was fixed at Rs. 2 per *bisi*, giving a revenue of Rs. 2,082. They were left distinct because the Deputy Commissioner can make any reduction for land fallen out of cultivation during the course of the settlement; and as the cultivators are merely siñhās coming from a distance, the realizations must vary from year to year. If a tenant is unable to cultivate any portion of his holding in any year he can resign it by application to the Deputy Commissioner, who can either allow it to remain waste or give it to another tenant.

The new
revenue.

The revenue as determined by Mr. Goudge was fixed at Rs. 50,314, this being the final demand, for the enhancement was made progressive and spread over a period of ten years. This figure not only includes the potato fields, but also the revenue of mahals which are free of revenue or of which the revenue is assigned; the actual sum payable to Government being Rs. 43,111. This gives an increase of 19.93 per cent. on Mr. Beckett's assessment, and 30.72 per cent. on the expiring demand which include the summary assessment of the potato mahals. It must be observed at the same time that the dilution of 1880 had resulted in a reduction of 3.76 per cent. on the original revenue of 1870. The general incidence was raised from Rs. 0-13-4 to Rs. 0-14-1 per soil unit, the greatest increase occurring in the prosperous pargana of Chhakhata. In justification of this considerable enhancement, Mr. Goudge writes:—

"I have endeavoured throughout my assessments to keep in view the principle that a moderate demand is most suitable to a mountainous tract where cultivation is neglected and complete statistics are not available. Judging by the general standard of comfort and resources of the people drawn from the Bhabar and miscellaneous sources, they could pay much more; but any attempt to obtain a full quota of Government revenue on the basis of such rough and general data would have led me into difficulties. Wealth is unevenly distributed; and in taking a patta out of asses at it is inevitable that some villages

must get off more lightly than their resources would justify if they were considered in detail. I have not, however, entirely lost sight of the assessment in any village, and have tried to prevent anomalies by changing rates where necessary ; but it is a defect inherent in the method of assessment employed, that there must be some anomalies."

The fiscal history of the Bhabar from the British conquest is practically the history of its administration by the three great rulers of Kumaun, Mr. Traill up to 1835, Mr. Batten from 1840 to 1850, and Sir Henry Ramsay from 1850 to 1884. Mr. Traill found the Bhabar an almost untilled jungle, the haunt of numerous bands of dacoits, and his time was taken up with attempts at their suppression and also in settling the innumerable boundary disputes with the authorities of the plains. The earlier condition of the Bhabar has been left for the historical account of the district. At annexation, Chilikia belonged to Moradabad and Bijnor ; the Chaubhainsi Bhabar was all jungle ; and almost the whole of the cultivation was confined to Kotah, which paid Rs. 1,062 out of the total Gurkhal assessment of Rs. 1,385, which was retained for 1815. The first important question to be decided was the delimitation of the boundary and jurisdiction. Under native rule the Tharus and Bhuksas used to move to and from the foot of the hills as they pleased, and villages were sometimes reckoned as being in both plains and hills. Revenue was paid to both Governments in order to ensure protection and this increased the confusion.*

To such a height had these disputes risen that we find them occupying a great portion of the correspondence of the years 1823—26, and the question of the boundary between the Bhabar and Rohilkhand was the burning one of the day. In 1823 a survey was ordered to be made and Mr. Traill and Mr. Hallid, Collector of Bareilly, were directed to settle the boundaries of their respective districts. It was eventually determined that an experimental boundary should be made by a line drawn from one spur of the lower hills which jut out into the plains to the adjoining one ; and to Mr. Hallid was entrusted the task of demarcating this line along the whole border of Bareilly

* *Vide* Traill's first Bhabar report to Government, 15th January 1822

and Moradabad, and the villages south of the line and the farming leases of forest products, one of the most fruitful causes of dispute, were to be transferred to the adjoining districts of the plains. In 1826 a joint report was sent in and adopted. From the Dharon river, seven miles west of the Phikarao, to the Gaibua promontory, the principle of making the projecting headlands the points of demarcation was followed, and so far as possible those spots at which the cattle pens or *goths* of the herdsmen from the hills were established were included in the jurisdiction of the hills, whilst the hillmen were also allowed the privilege of pasture for their cattle in common with the men from the plains on payment of the usual grazing dues. From Gaibua the lower or southernmost range turns to the north, whilst the existing line of jurisdiction continued in the general direction from north-west to south-east, and here the latter line was followed and demarcated through the forest, the boundaries recognised by the headmen of the adjacent tracts being adopted. A map was made showing all these points, and copies were sent to the chief officers of the adjacent districts. The boundary was defined by pillars of large stones or of brick along its entire length. The importance of having correct boundaries was not in the least due to the value of the land for agricultural purposes, but to the grazing rights and forest produce, on which the revenue almost wholly depended. In 1826 the collection of the dues, which had been taken away in 1824, was restored to the hill administrators; with the determination of the boundary the work of fixing and collecting these dues was greatly simplified, and we hear very little of them afterwards.

The cultivated lands of the Bhabar were regularly assessed in 1820, 1828 and 1833, just as the hill *pattis* adjoining it. The details of these settlements will be found in the appendix.* It must be remembered, however, that revenue is only derived from the settled *mahals* of the Bhabar, and is quite distinct from the rent paid to the State as landlord of the directly-managed villages, which now constitute by far the greater portion of the Bhabar. In these villages there is no settlement, but the rent is determined by recurring revisions at regular intervals by the

Superintendent of the Bhabar Estates. There were no directly-managed villages, however, till 1850, and consequently rent does not appear as an item of income till that date.

From a report made in 1837 it appears that the revenue of Kotah and Chhakhata was Rs. 6,830.* In these two pattis 29 villages lying along the foot of the hills had been cultivated from olden times by the hillmen as their inalienable right. The headmen or padhāns received two ploughs (*hal*) of land as their remuneration, which they held during their tenure of office. The *hal* was the amount of land a pair of bullocks could plough in a day, and for this amount tenants-at-will paid five rupees. Besides these villages, some 61 others had been brought into cultivation since 1815 by granting the proprietary right to any one who cleared the waste. These new proprietors let the land to tenants-at-will at a rate ranging from two to four rupees per *hal*. Further, twelve villages on the Tarai border were leased to Bhuksas on a system of advances by the local landholders. Nevertheless, considering the present state of affairs, there was in 1837 but little cultivation in the Kotah Bhabar, though it was then the richest portion of the tract. Lalji Chakrayat was the principal landholder and compared with others was a man of some substance; he had materially aided in the development of the Bhabar by planting colonies of cultivators and arranging for their support. In the Chhakhata Bhabar from the foot of the hills to Tanda there was some show of cultivation close to the *gāls* or watercourses, but the experiment of digging a well made near Tanda showed that no water could be obtained at a depth of 180 cubits throughout the continuous belt of thick forest which existed there. Harak Singh Mahra, the patwari, was the most influential person in this tract. In the Chaubhainsi Bhabar there was hardly any cultivation, and the revenue was less than Rs. 1,000. Chorgallia alone was well watered and well cultivated, and here the principal landholders, Chaudhri and Bachhi Bargalli, showed what could be effected by judicious management.

Mr. Batten's connection with the Bhabar may be said to comprise the period from 1840 to 1850. His report† is interesting

* To Board, dated 17th July 1837

† To Board, dated 10th February 1846.

and gave the first detailed account of any settlement of the Bhabar. The result of his assessment was a revenue of Rs. 8,600 on a cultivated area of 17,600 acres, and this excludes the whole of Chilkia which still belonged to the southern districts. The increase in the revenue effected by Mr. Batten was due to new lands brought under cultivation and not to enhancement on those already cultivated. The attempts that were made to extend the clearings in early years were not uniformly successful; in Chanhainsi, for instance, there were in 1846 as many as nine waste villages, while only six had been newly cultivated, and there was in fact a considerable drop in the revenue of that patti between 1828 and the year of Mr. Batten's settlement. While the settled villages of to-day represent for the most part those that were cultivated in the early days of British rule, there are many others that were once given in proprietary right, but which were subsequently abandoned and became the actual property of Government.

From 1850 for a very long period the history of the Bhabar is the story of its management by Sir Henry Ramsay, then Captain Ramsay, in whose charge it was placed with power to expend any available surplus on improvements. He received a permanent advance of Rs. 10,000 for this purpose, and this was soon paid back by the opening of temporary irrigation channels, and more especially by taking the entire tract under direct management. The original land revenue continued to be paid into the treasury, and in a short time the return from this source alone greatly exceeded the revenue originally fixed, so that in 1853 it had risen to nearly Rs. 20,000. All this surplus was invested in canals, and now villages sprang up as far as the water-supply was made available. After the mutiny, Government was induced in 1860 to allow Raja Sheoraj Singh of Kashipur to exchange Chilkia for some confiscated villages of Afzalgarh in Bijnor. The former property consisted of eight villages assessed at Rs. 1,800, which were taken under direct management, and with them six bhuiyachara villages divided into 11 mahals were also transferred and added to the settled villages of the Bhabar together with a large block of forest. The total revenue of the new allotment was Rs. 4,005 at which figure it

remained for many years. In 1850 the revenue of the whole Bhabar was Rs. 8,599, but of this Rs. 1,911 belonged to the Bhuksa villages of Moti Chakrayat, which were turned into waste, and the cultivators carried down to Gadarpur by Major Jones in order that the water which they wasted might be taken to the Tarai. Consequently, deducting this amount and including Chilkia, the revenue of the Bhabar was Rs. 10,743 when Captain Ramsay took over charge. During this period the development of the Bhabar was rapid. Haldwani, for instance, rose from a group of grass huts to a substantially-built municipal town; the climate materially improved with the extensive clearings, while the opening of the railway has given rise to a considerable export trade from what was formerly a mere waterless forest.

During Sir Henry Ramsay's time there were no less than three revisions of settlement in the Bhabar. The first was that of Mr. Beckett in 1864, and resulted in a total demand of Rs. 59,721, of which Chilkia contributed no less than Rs. 7,979, which shows that the rents of the directly-managed villages and those newly founded had increased from Rs. 2,255 in 1860 to Rs. 3,924, while in the other *puttis* the advance was much more marked; or the settled villages showed but little increase, almost the whole enhancement being derived from those under direct management. Mr. Beckett's settlement was merely a revision of that made by Mr. Batten, which, though nominally quinquennial, was allowed to run on for over 20 years. In the settled villages Mr. Beckett imposed a rate of 4 annas $3\frac{1}{2}$ pies per *bigha* of 86 feet square on *hissadars*, and six annas for *khaikars* or occupancy tenants. In the *khām* villages the maximum rate was six annas, with a minimum of two annas according to local circumstances. He also for the first time introduced a fee for the *padhān* at the rate of five per cent. on the rent value of each share. The increase was partially due to extended cultivation in the settled villages, but far more so to the creation of new villages directly managed.

In 1869 another revision of settlement was made by Captain Liston. He at first attempted a plane-table survey, but as it gave dissatisfaction it was abandoned for the old system of rope measurement. In the settled villages the *khaukar's* rent was

raised from six to eight annas a *bigha*, and the *hissadar's* rent was increased to six annas six pies. The *padhán's* fee or *haq sirgirohi* was no longer paid by the tenantry direct, but transferred as a charge to be met by Government out of collections. In the *khám* villages the maximum rate was raised to eight annas. The practice of payment in two instalments, *rabi* and *kharif*, was abolished except in the Tharu villages, and the whole demand was made payable in one *kist*—a system which still prevails. The total demand, including assessed revenue and *khám* rents, was raised to Rs. 94,919, which indicates an even more rapid progress in five years than in the twenty years intervening between the settlements of 1843 and 1864.

Ten years later another revision took place and was conducted by Colonel Garstin. He made but slight alterations in the rent rates, but introduced several important changes. In the settled villages he allowed the *khaikar's* rent to stand at eight annas, but he levelled up the *hissadar's* rate to the same figure, and by way of compensation imposed a *málikána* of three annas in the rupee on the *khaikar* to be paid to the shareholder. He also made the *haq sirgirohi* payable by all alike and introduced the three per cent. *patwari* cess. In the directly-managed villages no change was made in the rent rate, but the *haq sirgirohi* was doubled and again made directly payable by the tenants and the *patwari* cess was also applied. That the extra amount thus involved could be easily paid is obvious from the fact that the income from the Bhabar lands had risen to Rs. 1,35,184—an increase of 42·42 per cent. in ten years.

In 1889 a cadastral survey of the whole Bhabar was made, the standard adopted being a *bigha* of 82·5 feet square or one-fourth of the standard *bigha*. This survey was rendered necessary on account of the absence of any useful map for the settled villages, while in those directly managed there were no maps at all. Following on this came the settlement of 1889 by Mr. C. H. Roberts. The report was written by Mr. R. Hollingbery after Mr. Roberts' departure on leave. His work consisted of a resettlement of the settled villages, 57 in number, as well as the 14 *bhaiyachara* *mahals* in Chilkia which had been settled by Sir Henry Ramsay in 1878 for three years term

which was allowed to run on with a few modifications on account of special circumstances, and also a revision of rent in the *khām* villages. The latter numbered 429 in all, and the whole involved the assessment of some 50,000 acres of cultivation. For every village there were prepared a *khāra* showing details of each holding, a *muntakhīb* for the whole village, and a *jumalandi* or rent-roll, while in the settled villages a *khevat* was also prepared, showing the demand and cesses by shares and for the whole village. For assessment purposes the Bhabar was divided into eleven blocks, details of which are given in the separate articles on the several pattis. The maximum rent rate was raised to ten annas per bigha, and three lower rates were fixed, for different soils and localities, of eight, six and four annas. Excluding these variations, the percentages of the rent taken for *padhān's* fees and *patwari* rate in settled and *khām* villages, and for the *kharkār's mālikāna* in settled estates were exactly the same as those fixed by Colonel Garstin. In the deposited villages, however, which numbered 37 in all, the proprietor's *mālikāna* was fixed at ten per cent. only. In assessing the Chilkia settled villages, Mr. Roberts amalgamated the water-rate, formerly charged as a separate item, with the rent-rate, and took for Government 55 per cent. of the whole, as well as three per cent. for the *patwari* rate. Elsewhere the old system was maintained in principle. The result was that the revenue of the settled villages was raised to Rs. 51,367, and that of the *khām* estates to Rs. 1,45,000, making a total of Rs. 1,96,367 or 165 times as much as the tract yielded at the conquest, and nearly 16 times the revenue obtained in the first year of Sir Henry Ramsay's administration.

Mr. Roberts' assessment was sanctioned for a period of ten years. Consequently, on the 19th of December, 1902, the settled villages of the Bhabar, comprising 73 *mahāls* in all, were brought under settlement according to the provisions of the old Land Revenue Act of 1873, as Act III of 1901 is not applied to Kumaun. The Deputy Commissioner, Mr. J. C. Faunthorpe, was placed in charge of the settlement operations. It was estimated that there has been an increase of cultivation in these *mahāls* amounting to 2,230 or four per cent., and an increase

of an anna per bigha all round was contemplated. The actual work of assessment was carried out by Mr. I. D. F. Campbell, the Superintendent of the Government Estates. He dealt with each village on its merits, and did not treat the increase of one anna as a maximum, raising the rate by two annas in some cases, and in others retaining the old rate or even reducing it. Of the 73 settled mahals, five had become *muqaddami*—an innovation introduced by Colonel Grigg, when Commissioner, whereby a headman or *muqaddam* collected the rents for Government in lieu of the old proprietor, who had renounced the village, the *muqaddam* receiving dues to the amount of $6\frac{1}{2}$ per cent., and being allowed to cultivate at a favoured rate in common with the old proprietors. This system had been also applied to four villages formerly held *khām*; but in no case was it a success, and it has now been practically abolished, as only one village, Debipura, remains under this tenure, while seven of the villages have been made *khām*, and the ninth handed back to the former proprietor. One settled village, Garhibulchand in Chilkia, had become waste, so that there were only 67 mahals to deal with. Of these 31 were in Chhakhata, 22 in Kotah and 14 in Chilkia. In the case of the 39 “deposited villages,” which had been relinquished by the proprietors, who received in return a *mālikāna* of ten per cent., all were made *khām* with the exception of two, in which the proprietors applied for resettlement. The *khām* or directly-managed villages, 416 in all, were dealt with at the same time and in the same manner as the others. Mr. Campbell raised the maximum rate to twelve annas per *bigha*, and this he applied to all the better villages, except in the Chorgallia and Kamola-Dhamola circles. In 93 villages no change was made, and in 16 the old rates were reduced. The result of the assessment was that the demand was raised to Rs. 56,592 for the settled villages, giving an increase of 19 per cent.; and to Rs. 1,85,487 in the *khām* villages, which amounted to an increase of 18 per cent. on the rents paid in the preceding year. The settlement was sanctioned on the 28th of December 1903, for a period of ten years.

18. There have been no regular settlements of the greater portion of the Tarai. At the present time the actual proprietary right is vested in Government itself in the great majority of

the villages ; in pargana Nanakmata alone, as well as in a few isolated villages elsewhere, do we find a tenure at all resembling that of the zamindari of the plains, while the bulk of the villages are managed directly by Government. In early days the several parganas were under different management, and their fiscal history cannot be well dealt with as a whole. Up to 1764 the whole Tarai belonged to the hill state of Kumaun, but in that year it passed into the hands of the Pathans of Rohilkhand. About that time the rent-roll stood at Rs. 2,92,415,* and while the Mahrattas were laying waste the southern parts of Rohilkhand, the Tarai was more extensively cultivated and more densely inhabited than at any previous or subsequent period. Thousands of families fled hither for refuge, and dug water-courses, constructed dams and built forts, whither they betook themselves immediately after cutting the kharif crops, before the Mahrattas took the field. Thousands of them, however, escaped the sword only to die of malaria.

At the cession of 1801 Bazpur pargana was attached to Kashipur and was assessed with the rest of the Moradabad district. The two adjoining parganas of Gadarpur and Rudarpur belonged to Bareilly, and in the first year they paid a revenue of Rs. 48,000. This rapidly increased till, between 1814 and 1817, they paid no less than Rs. 92,000. There were summary triennial settlements in 1803 and 1806, followed by a quarteunial settlement in 1809, and two settlements for five years in 1813 and 1818. Unfortunately no figures for the assessments are available. Then came two settlements for seven years each in 1823 and 1830. The seventh settlement was cancelled in 1835, and the two parganas were then handed over to Raja Guman Singh, son of Lal Singh of the Chand family of Almora, in lease for Rs. 28,270, so that it appears that a considerable decline had already set in. After his death the property was administered for a few years by the Court of Wards, but in 1841 Raja Sheoraj Singh attained his majority, and by his mismanagement and neglect the estates became ruined, and in 1850 he resigned his lease. He had not been the sole farmer of these parganas, for Amir Khan and others

* J. A. S. B., 1844, pp. 161—186.

held 29 villages, of which 16 lapsed to Government, owing to desertion and neglect, while 13 remained in the hands of the original owners. The two parganas were placed in charge of Captain Jones, who was not very hopeful of success in managing them.

In the meantime the adjoining pargana of Kilpuri had fared no better. In 1803 it was held by Raja Lal Singh, who had obtained it from Oudh. He so ruined it by mismanagement that he persuaded the British Government to exchange it for Chachait in Bareilly, but he still retained the lease. This his grandson resigned in 1848, when the pargana came under the direct management of the Hon'ble R. Drummond, Deputy Collector of Pilibhit. Many of the villages had been held by one Muhammad Ahsan, but he, too, became impoverished and in 1847 he applied for direct management. His attempts at irrigation and also those of Raja Sheoraj Singh had resulted in the conversion of the pargana into an immense swamp, "swarming with wild beasts and presenting an aspect of desolation scarcely conceivable to one not acquainted with the Tarai. The site of the old town or village was recognisable by the bare and blackened trunks of the mango grove that once bordered it. They were then standing in a dark pool of stagnant water, and served as perches for the numerous cormorants and herons, whose harsh cries, with the occasional burst of a frightened deer or stealthy tread of a tiger, were the only sounds that broke upon this dreary solitude."* Mr. Drummond at once set to work to improve matters and effected much, as did Captain Jones in the western tracts, by cutting through the obstructions in the drainage and constructing new canals on rational lines.

The history of Nanakmata is more obscure. There were formerly two parganas, Nanakmata proper, which originally belonged to Pilibhit, and Mainajhundi, which formed part of pargana Richha in Bareilly. The latter is not mentioned in Mr. Moens' report of the settlement of that district under Regulation IX of 1833, and all we know is that it was transferred after the mutiny. In Nanakmata itself there is a bare record of seven summary assessments. The first and second in

1803 and 1806 were for three years; the third in 1809 was apparently quartennial and the revenue Rs. 5,670. The next settlements of 1813 and 1818 were for five years each; but the revenue remained at Rs. 9,727 throughout, nor did it change at the sixth settlement, which seems to have taken place about 1830; the revenue was reduced to Rs. 8,727. In 1840 the pargana of Nanakmata was assessed by Mr. T. Robinson, then Commissioner of Rohilkhand, who imposed a revenue of Rs. 9,406 which, however, includes that of the *mustajiri* villages in Mainajhundi, and this ran on for a period of 40 years. Mr. J. C. Macdonald resettled the pargana in 1881, for a period of twenty-five years, which will expire in 1906. Mr. Macdonald's assessment was admittedly light, as considerably less than half assets was taken. The revenue was raised to Rs. 11,700, which, however, was considered ample for a pargana thus peculiarly circumstanced. The only difference between the Mainajhundi and Nanakmata villages is that in the former the *mustajirs* have the right to sell or mortgage, and in the latter they have not.

The Bilheri pargana was not taken under direct management till a later date. At the cession of Rohilkhand it was apparently amalgamated with the Pilibhit district, but in 1814 Major Hearsey purchased the entire taluqa of Bilheri at auction for arrears of revenue. After the mutiny, during the administration of Sir Henry Ramsay, Bilheri was still in the hands of the Hearsey family. It passed to Captain H. J. Hearsey, whose widow sold it to her brother, Mr. W. N. Hearsey, the latter agreeing to pay her an annuity of Rs. 2,400 per annum. The Government purchased the estate from him for three lakhs of rupees, and it was agreed that Mr. Hearsey was to convert a portion of this to meet his sister's annuity to the extent of Rs. 1,200 yearly. This agreement was never carried out, and consequently for some years the payment was made from the rents realized by Government. In 1882 the annuity was bought up for Rs. 16,000 and the whole of the pargana came under direct management, excepting five villages which are still held in *mustajiri* tenure.

In this manner the whole of the Tarai with the exception of the settled portion of Nanakmata, became an estate under the

direct management of Government. It was administered by Sir Henry Ramsay as a separate subdivision of Kumaun under the charge of an officer, styled the Superintendent, and was practically a separate district, to which was added Kashipur in 1870. On Sir Henry Ramsay's retirement, the Bhabar estates which he had managed himself were in 1884 made over to the Senior Assistant Commissioner of Kumaun, while the Tarai remained separate as before. The two properties continued to be in different districts till 1891, when they were both brought under the Deputy Commissioner of Naini Tal. Their amalgamation was proposed in September, 1894, and in 1895 an Assistant Commissioner was appointed in charge of the two Government Estates, while in 1900 a special permanent officer was appointed to the charge, as it was considered that the tenure of office should be as far as possible unbroken in a tract where paternal Government had proved so decided a success.

For nearly twenty years the Tarai was administered by Mr. J. C. Macdonald, and to that officer is due the credit of having raised the estate from the condition of extreme depression which was recorded by Captain Jones to its present prosperity. Owing to its peculiar circumstances the Tarai has never been administered under the same fiscal system as other districts. It is true that the greater part of Kashipur and also of Nanakmata are regularly assessed to revenue, but the former was entirely separated from the Tarai in 1895. For the directly-managed portion the same system was followed as in the Bhabar, with the exception that a lump sum was fixed as revenue on each pargana, while the surplus accruing from rents and other sources might be devoted to improvements. This lump sum was treated as land revenue and was paid directly to the credit of Government, while all surplus income after the satisfaction of this claim was credited to the estates. The land revenue properly falls into two divisions, the first consisting of that assessed on the settled villages of Nanakmata and the *mustajiri* estates in other parganas, while the rest is that assessed on the directly-managed portions. The first amounted to Rs. 9,755 until the settlement of Nanakmata in 1885, when it was increased by Rs. 1,541. The second was fixed at Rs. 57,507 as early as 1843 and continued to run on

at this figure till 1890, when it fell to Rs. 57,135, the reduction being due to the restoration of three villages in Nanakmata to the old zamindars, these having been sequestrated for arrears. At the present time the actual revenue of the Government Estates stands at the same figure. It will be seen that this land-revenue is of a merely nominal character. The figures that are of real interest are the rentals, which take the place of land-revenue in other districts. It was originally estimated that the nominal land revenue should be taken at something approaching half assets, and in the earlier years of direct management it would seem that this estimation was approximately correct. It was not long, however, before the surplus rents rose to a very considerable figure, owing to the judicious management of Mr. Macdonald. Very large sums were expended on works of irrigation and other improvements, all of which were calculated, together with the fertility of the soil and the easy rents imposed, to attract numerous cultivators to the Tarai from elsewhere. The rents of necessity vary with the seasons, but the progress of the estates will be seen from an examination of the average receipts from rent in successive periods of five years. In 1882 the total income under this head was Rs. 1,85,064. From 1882 to 1887 the average was Rs. 2,11,610 and from 1887 to 1892 it was no less than Rs. 2,25,005. With Mr. Macdonald's death in 1890 there came a great decline in the Tarai owing not only to bad seasons, but also to the constant change of management consequent on the break up of a *régime* of so long a standing. From 1892 to 1897 the average rental collections were no more than Rs. 1,99,539, the lowest point being reached in 1895.

In that year a kind of settlement was made by Mr. H. J. R. Boas, who was then in charge of the Tarai. The object in view was to attain to some equalization of the rentals which hitherto had exhibited great variations in the different parganas and also to adjust the claims of padhāns and hissadārs. The result was an all-round increase of 11·9 per cent., and this was obtained by imposing an average rent-rate of five annas per cultivated *bigha*. The average was highest in Bazpur, the best pargana, where it rose to Re 0-5-7 and lowest in Bilheri where it was only Re. 0-4-4 per *bigha*. The of this revision was at once

apparent, for from 1898 to 1903 the average rental annually realized was Rs. 2,35,633. Of recent years, too, the appointment of a permanent officer in charge of the Tarai seems to have been attended with beneficial results, for since 1900 the rents have risen to a higher level than that attained in any year of the previous history of the tract.

From the British occupation up to the year 1844 Kashipur and Jaspur were separate revenue divisions with distinct settlements and formed part of the Moradabad district, but their fiscal history was the same, as the early settlements were made at the same time and under exactly similar circumstances. Prior to Mr. Money's settlement under Regulation IX of 1833 there had been, as in the Tarai, eight assessments of the revenue, comprising two triennial settlements from 1803 to 1808, a quartennial settlement in 1809, followed by a settlement for five years in 1813, and this was partially extended and altered for four more periods of five years up to 1837. All these were merely summary settlements and were based on a consideration of the previous demand and the collections. In 1838 Mr. Money made a settlement which was extended till 1879. He determined to have revenue rates only, and imposed a demand of Rs. 1,02,367 on the whole pargana with an incidence of Rs. 2 per cultivated acre. The settlement appears to have been fairly lenient although, owing to the peculiar nature of Kashipur, it is not easy to form a conclusive opinion from the information that during the forty years of its currency eight mahals, parts of four villages were sold for arrears of revenue and purchased by Government, while certain others were held under direct management.

In 1844 the revenue divisions of the Moradabad district were rearranged: Bazpur, Kashipur and Jaspur, along with sundry villages from Thakurdwara, Sarkara, Moradabad and Afzalgarh, were constituted into one pargana under the name of Kashipur. Shortly before the mutiny, Bazpur was given back to the Tarai, then part of the Rohilkhand division, from which it was transferred to Kumaun in 1859: in 1860 a number of other villages followed suit, and in the same year the Kashipur and Thakurdwara tahsils were amalgamated the headquarters being fixed at the latter place. In October, 1870, the entire

pargana of Kashipur was given over to the Tarai, which was constituted a separate district. In 1879 Mr. D. M. Smeaton made a settlement of Kashipur for a period of 25 years. The revenue was fixed at Rs. 1,05,388, which showed a very small increase on the assessment of Mr. Money, although cultivation had extended by about twelve per cent. Subsequent reductions in deteriorated villages diminished the total by some Rs. 10,000. The present settlement will fall in in 1905, and the results will then probably show a great difference from those obtained by Mr. Smeaton. During the last ten or twelve years the pargana has greatly declined: the fact that both the population and the cultivated area shrank by 25 per cent. between 1891 and 1901 speaks for itself. From 1870 onwards Kashipur remained in the Tarai district, and even after 1891 it was managed by the Superintendent; it was not till 1895 that it became a separate subdivision, and was separated from the Government estates, save as regards the few *kham* villages and the control of the canals.

For the purposes of police administration the district is divided into two distinct portions, the one consisting of the Tarai, Kashipur and the Bhabar, and the other of the hill pattis. The entire area of the former is under police jurisdiction, but in the latter the settlement of Naini Tal alone contains regular police. In Naini Tal itself there are two stations within municipal limits, but the police jurisdiction does not extend beyond a distance of five miles from the municipal boundaries. There are, however, three outposts in the hills, all dependent on the Naini Tal circle, and situated at Jeolikote, Bhim Tal and Khairna. The two last are on the great pilgrim route to Badrinath in Garhwal, and are only maintained from May to November, while the pilgrims are moving up and down. For the rest of the hills the patwaris perform the duties of police officers and are under the supervision of the peshkar of Naini Tal, the qanungo, and the superintendent of patwaris. From the first, the police administration has formed part of the patwari's duties; they have to apprehend offenders and report crimes, casualties and suicides to the peshkar. In these duties they are assisted by the thokdars and padhans or village headmen. The latter are bound to arrest offenders and report crime to the patwaris and to provide

for the forwarding for trial of all persons charged with heinous offences; while the thokdars have to report crime overlooked by the padhans.

In the Tarai and Bhabar we find the ordinary police arrangements of the plains. There are eight circles, each having a police-station with a staff of investigating officers and constables. These circles generally correspond with the parganas in which the stations are situated, the latter being located at Haldwani and Ramnagar in the Bhabar, and at Kashipur, Bazpur, Gadarpur, Kichha, Sitarganj and Khatima in the Tarai. Attached to these stations are six outposts, maintained merely for the purpose of patrolling roads and the like, and not as reporting stations. Of these there are two in the Bazpur circle, at Sultanpur and Khela Khara. The outpost of Rudarpur belongs to the Kichha circle, and that at Majhauri to Sitarganj. The two remaining outposts, at Kathgodam and Kaladhungi, are dependent on the Haldwani circle. The average area of each circle is 225 square miles, containing a population of 40,000 persons. Besides all these, there are municipal police supported by the local funds at Naini Tal, Haldwani and Kashipur, and town police in the Act XX towns of Jaspur, Kaladhungi, Ramnagar and Ranibagh-Kathgodam. Both the municipal and town police are enlisted under the provisions of Act V of 1861, and at the rate of one constable for every hundred houses. Further, there are 386 village chaukidars, of whom 234 belong to the Tarai, being paid on the old system of a small rent-free grant called *bonda* and a dole of grain ranging from 10 to 16 *sers* per plough at each harvest; and 128 in Kashipur, paid in cash; and 24 road chaukidars employed in patrolling the road from Bareilly to Haldwani, from Ramnagar to Kashipur, and from Kashipur to Kaladhungi. Up to 1891 there were no regular police in the Tarai and Bhabar, their place being taken by the revenue officials, as in the hills, and it was not until 1893 that the rural police were introduced. The grain-paid chaukidars have proved very inefficient and cash wages are now to be introduced. At the present time the strength of the civil police is 19 investigating officers, 15 clerks and 174 constables. The armed police comprise one sub-inspector 28 head constables and

122 men, but this body forms a reserve for the entire Kumaun division. A force of 12 mounted police is posted to the district, and is chiefly employed in patrolling the Rampur State border. The whole force is under the control of the Superintendent of Police for the Kumaun Division, who is assisted by one reserve and one visiting inspector for this district.

From the point of view of criminal administration the district falls into two main divisions corresponding to those which mark the different police arrangements. In the hill patts there is little or no crime, and the inhabitants are very law-abiding. As in Almora, the comparative absence of crime in the hilly portion of the district is a very noticeable feature in the general administration, almost the whole work of the courts consisting of revenue and civil suits. In the Tarai and Bhabar, on the other hand, and especially in the former, theft, burglary, robbery and dacoity are common forms of crime. The proximity of the Rampur State is a serious difficulty in the way of police administration in this district, affording as it does a ready refuge to the numerous criminals who reside in it, who make descents on the Tarai and Bhabar villages and are back in native territory before news of their raid has reached the authorities. These depredations can only be checked by a system of constant patrolling, but the unhealthiness of the tract militates against efficiency, while the general character of the immigrants tends to the concealment of much serious crime. The criminal statistics for the district since 1896 will be found in the appendix.*

The history of the criminal administration of the district from the introduction of British rule shows that there has been very little change in the forms of crime and in the distribution of the criminal population. The hill patts and the Bhabar belonged to Kumaun up to 1891, and never at any period has the need appeared for the introduction of regular police. In 1816 Mr. Traill wrote that "the small number of offences committed in this province has rendered the criminal police an object of secondary consideration. Murder is a crime almost unknown, and theft and robbery are of very rare occurrence. From the

period of the introduction of the British Government into this province the persons confined for criminal offences here have never exceeded twelve, the greater part of whom have always been natives of the plains.* Again, in 1822, the Commissioner remarked that during the previous year there were only 65 criminals confined in the Almora jail, of whom only six were charged with heinous offence—a surprisingly small number for so large a district. The only serious form of crime was the robberies that occurred along the foot of the hills, but they were perpetrated by people from the plains who retired thither with their booty. In the same year Mr. Glyn was deputed to Kumaun to report on the police and criminal administration. His report confirms the account already given by Traill; mention was made of the gang robberies in the Bhabar, while the most fruitful cause of complaint was found to be disputes regarding women. In consequence of suggestions made in this report it was ordered that the forced labour for the carriage of goods should cease, and that inquests should be held in all cases of sudden deaths—a step rendered necessary by the number of deaths reported as due to the attacks of wild animals, snake-bites, suicides and accidents. In 1824 no less than 227 deaths were attributed to these causes. At the same time steps were taken to abolish the prevailing custom of selling children and others as slaves. This practice had formally received the sanction of the previous governments in the form of a duty on the export of slaves. This duty had been abolished at the conquest, but the practice still remained, although in a mitigated degree. The principal customers were the Pathans of Rampur and the south. No actual measures were taken by Government for the suppression of this traffic, as it was hoped that the custom would cease with the increase of prosperity; but the sale of wives by their husbands, and of widows by the heirs of the deceased, and of children to be taken out of the country for the purpose of being made household slaves, was forbidden and made penal. As a matter of fact, slavery was extinguished by the refusal to permit applications for the restoration of slaves or for the enforcement of slavery to be brought in the courts. In 1829 the practice of *sati* was abolished.

* To Government, dated 15th February 1816

In the Tarai parganas, however, there was a different state of things. From very early times the forests and fastnesses of the lower hills afforded a safe retreat to bands of robbers, and the former governments, finding that there were no existing means of putting a stop to the depredation of these bands, took the leaders of each gang in their employment and authorized them to levy certain dues on all merchandise passing through, the lessees engaging on their part to maintain the watch and ward of the borders and to indemnify traders for any losses by plunder. The Gurkhas, indeed, attempted to dispense with these Heri and Mewati watchmen, and parties of troops were detailed for patrolling the roads, but the attempt proved unsuccessful and recourse was again had to the old system.* On the British occupation, the descendants of the original lessees, though they could no longer be called leaders of banditti, were formidable on account of the number of their followers, and therefore were permitted to retain their office: the difficulty being enhanced by the frequent transfers of the jurisdiction of the Tarai between Kumaun and the plains districts. Mr. Seton, one of the earlier Magistrates of Moradabad, granted certain lands in jagir to the Heri and Mewati leaders; to Ain Khan the Kalyanpur *ilaga*, and to Turab Khan four villages, the grantees engaging as before to put a stop to robberies and to compensate losses by traders. A regular list of dues was drawn up and agreed to, and being individually very small were willingly paid. The charge for exports ranged from one to two pice per coolie-load, according to the locality, and for imports from one to four annas. Each bullock cart laden with catechu paid four annas; while a charge of two pice was levied on each cattle station and one anna per head on hill cattle pastured in the lowlands. In 1817 Ain Khan had charge of the traffic passing from Bhamauri, Kotah and Dhikuli to Rudarpur, Chilkia and Kashipur; while Ami Khan Mewati held that passing by the Kali Kumaun and Chaubhainsi passes to and from Barmdeo, Bilheri and Pilibhit. Early in 1818 Mr. Shakespear, then Superintendent of police, brought this state of affairs to the notice of Government. He

* To Board, dated 6th December 1817

pointed out "the apparently destructive tendency of the system recognised in these leases by which a farmer, for the inconsiderable sum of Rs. 8,881, was empowered to establish a number of posts along a line of country extending upwards of sixty miles between the Ramganga and Sarda rivers and to levy customs apparently almost undefined in their amount on all articles of trade with the hills, such duties differing in no respect save their being licensed from those restrictions on the transit of commerce which the Board had forbidden as arbitrary exactions." The consequence of this remonstrance was that the Board instructed the Commissioner to use no efforts for a resettlement of the existing leases on their expiry until further orders, and that the protection of the country should be undertaken by a regularly engaged and paid establishment. There was reason to believe that the responsibility of the leaders for losses by theft and robbery was merely nominal, whilst the exactions to which traders were subjected under the plea of this nominal protection were not capable of being controlled. This advice was partly acted on and military posts were established along the frontier, composed of drafts from the Kumaun Provincial Battalion, whilst the leaders of the *chankidars* were relieved as far as possible of all police duties. On the death of Ain Khan in 1822, his *jágir* was resumed, and Mr. Haller was entrusted with the duty of introducing such measures as might ensure the safety of the persons and property of the traders proceeding to Kashipur or Chilkia. Provision was to be made by the grant of land for Ain Khan's family, and to his adherents was to be offered every inducement to take to agricultural pursuits by the offer of lands on easy terms. No improvement, however, took place, and in 1823 Mr. Traill had to call attention to the constant dacoities and highway robberies committed in the strip of country lying between the hills and the towns of Najibabad, Nagina and Afzalgarh, while the number of traders who had suffered was so great that communication between the plains and the hills had practically ceased.

Although the efforts made to induce the *Heris* and *Mewatis* to take to agricultural pursuits were in a great measure successful, their place in the *Tarai* was soon occupied by *Gújars* and other banditti from the *Duab* and *Bhoilkhand*. Complaints were

continually made to the authorities that organized bands of robbers had taken possession of the Tarai and were preventing the settlement of the forest tracts and were seriously interfering with the trade from the hills. In 1830 Mr. Peacock, Joint Magistrate of Moradabad, brought to the notice of Government the deplorable state of the low country caused by the outrages perpetrated by these robbers. There had been a considerable increase in the cost of policing the tracts, and this accompanied by an increase of crime. The banditti of the Bhabar were largely recruited from the remnants of the gang headed by Kulwa in the Dun, and in 1837 the Kumaun officers were reported "to have no sort of control over this tract, nor any information of what passes there. During the busy season the banditti," continues Mr. R. M. Bird, "establish themselves in the forest in overwhelming numbers and commit the most fearful atrocities against the merchants passing through with goods, the herdsmen from the hills and plains who take cattle there to graze, and the inhabitants of the villages and towns bordering on the forest. The information that I could obtain can have no pretension to statistical accuracy, but the histories that were told me of skeletons of human beings being found tied to trees and supposed to be the wretched herdsmen whom the robbers had bound alive and so left miserably to perish, and the accounts of merchants and travellers killed and wounded appeared authentic: and the village of Rudarpur was stated by the remaining inhabitants to have been rendered from a thriving town to a miserable hamlet by the oppression of the robbers." As a remedy for this state of things a special officer was proposed with joint jurisdiction with the local authorities over all the bordering districts. The result of this report was that the whole of the Garhwal Bhabar and the Patli Dun were transferred to Bijoor; Thakurdwara, Jaspur, Bazpur and Kashipur were assigned to Moradabad, and the rest of the Tarai to Pilibhit. Orders were also given directing that roads should be cut through the forest and constantly patrolled. In 1842 it was finally arranged that the Bhabar should be annexed to Kumaun, the officers of the southern districts having concurrent jurisdiction in so far as to warrant their following up and arresting any offender or fugitive taking shelter there

These measures were attended with beneficial results, but it must be confessed that dacoity is far from being unknown at the present time in the Tarai and Bhabar, where such marauders have such excellent opportunities for concealment and escape. The figures for the past few years are sufficiently illustrative of this fact. In the Tarai, too, cattle-thieving was once a very common crime, but has for a long time been on the decrease—a result that is doubtless due in large measure to the present system of voluntary cattle registration. The old gangs of Ahirs, Gujars and Mewatis have long been broken up, and although raids still occur from time to time from native territory, they are not so serious as in old days. The facilities for eluding pursuit, however, still remain, and the police have to work against heavy odds.

The duty on spirits locally manufactured and on hemp drugs has formed a portion of the revenue ever since the British occupation of Kumaun. Owing to the frequent changes in the administrative divisions of the province it is not easy to trace the excise history from the earliest times. Up to the formation of the present district of Naini Tal in 1891 the Tarai was entirely separate from the rest of Kumaun in this respect, being at first under the control of the Collectors of Bareilly and Moradabad, and later under the Superintendent. Up to 1821 there was no separate excise administration for Garhwal, but that district and the whole of Kumaun were included in a single farm. From 1822 the district of Kumaun was farmed separately, and consequently the records show only the Tarai figures up to the constitution of the Naini Tal district. In 1822 the total excise revenue of Kumaun was only Rs. 534, and up to 1837 it never rose above Rs. 1,300 in any year. In 1872, however, it had risen to Rs. 18,663, and in 1882 to Rs. 29,013. This increase seems to point to a very great spread of drinking habits amongst the people; but we are assured on the authority of the then Commissioner that this was not the case. "There is no consumption among the rural population of the hills—and I sincerely hope there never may be." There certainly were very few shops, and it is still true that the hill people do not, as a rule, indulge in liquor. The increase was due to the

presence of troops and the large influx of lowlanders from the plains. Nevertheless, the income from Kumaun rose to Rs. 46,548 in 1891, and the importance of the hill patts and the Bhabar, for the Tarai was still excluded, is shown by the fact that in the following year the revenue for the Almora district fell to Rs. 16,409. In 1896 there was a further transfer of the Tanakpur Bhabar to Almora; but the total income from that pargana does not amount to more than Rs. 500 annually. From 1891 to 1900 the excise administration of the district was entirely in the hands of the Deputy Commissioner, but since the latter year the duties of Excise officer have been held by the Assistant Commissioner. In 1894 an excise Inspector on preventive duty was appointed for the whole Kumaun Division—a step that has been attended with the most beneficial results.

In 1892 the number of shops licensed to sell country spirits was 41. Of these the Tanakpur shop was transferred to Almora, and two shops in Kashipur were closed in 1892 in consequence of the agreement with the Rampur State prohibiting the maintenance of liquor shops within a fixed distance on either side of the frontier. Of the existing 38 shops, two are in Naini Tal, one each at Ramnagar, Kaladhungi and Haldwani, four in the Kashipur pargana, and the remaining 29 in the Tarai. Prior to 1897 the system in vogue throughout the district was that of farms. In 1898 a change was made, and the district came under the outstill system. The effect of this measure was striking; the increase in fees amounted to no less than Rs. 12,000 over the total of 1897, and to Rs. 9,000 over the average income. As it is far more profitable to distil the spirit in the Bhabar and transport it thence to the hills, owing to the comparative cheapness of fuel, *gur* and *shira*, all the spirits for the Naini Tal market are produced at Haldwani in the Government distillery. Contractors holding more than one shop are permitted to distil at one and transport the liquor to the others under a pass. The number of shops licensed to sell English spirits was 13 in 1892 and is now 20, the increase being due to the grant of licenses to hotels and dak bungalows. The sale of country liquor, however, constitutes by far the largest proportion of the excise revenue of the district. This income is not reduced by infringement of the

law; for there is little or no illicit distillation. There is, however, a certain amount of smuggling, and proximity to the Rampur State affords an opportunity for exploiting the State liquor in the southern side of the Tarai. With regard to the drinking classes, a distinction must be made between the Tarai and the Bhabar tracts and the hill patts of the district. The consumption of country liquor in the former is vastly greater than in the latter, where the shops only exist in the town and are frequented by the plainsmen who come up and the artizan classes. The inhabitants of the Tarai, on the other hand, are on the whole the hardest drinkers in this province, and the use of spirits is almost universal. It is considered, and with some reason, that the use of spirits is beneficial as a protection against fever. The sales are larger in winter than in the hot weather. Usually spirits are sold in the licensed shops alone; but in the case of certain fairs and markets the licensees are expressly permitted to open branch shops—a concession which contributes largely to the excise revenue. Country liquor is usually sold at a price varying according to the strength of the spirit; it ranges from two annas to Re. 1-4-0 per quart bottle, the lower quality having far the larger sale, especially in the Tarai.

Generally speaking, the inhabitants of the Tarai are all cultivators and the excise revenue depends largely on the nature of the harvests; and in fact they frequently pay for the liquor in grain. The Tharus of Bilheri, Nanakmata and Kilpuri, the Bhukas in Rudarpur, Gadarpur and Bazpur, and the Malis of Kashipur, are all large consumers of country liquor; but owing to their increasing association with the plains it would seem that the hillmen are gradually losing the reputation they once possessed of being total abstainers. In the hills the residents, permanent or migratory, of Naini Tal are responsible for more than a quarter of the whole excise revenue of the district; the large European population and the consequent number of servants creating a demand for the more highly taxed commodities in the shape of European and native imported liquor and for locally manufactured liquor of higher strength than that usually consumed by the cultivators of the Tarai.

At Jeolikot, on the road from Kathgodam to Naini Tal, there is a brewery belonging to an English company, which also has an establishment at Bareilly. The Naini Tal Brewery Company was established in 1876, and its operations were very largely extended in 1897. From that year to 1902 the average annual export of malt liquor has amounted to over 166,000 gallons, which is chiefly conveyed by the railway to Bareilly and is distributed over the north of India. In 1903 the total output was no less than 234,805 gallons, of which over 177,000 gallons were supplied to the troops.

The only other excise commodity of any importance that is used in this district is charas. Although there is no prohibition against the cultivation of hemp plant in the hills, yet in this district, in contradistinction to Almora, little or no charas is produced. The consumption of charas is not confined to any particular class or creed; it is a universal practice throughout Kumaun. It is a common sight to see travellers plucking the wild hemp and rubbing it between their hands in order to extract the resinous juice of the plant therefrom. Other preparations of hemp are little known; bhang, which comprises the larger leaves and capsules of the plant without the stalks, is consumed to a certain extent by those cultivators of the Tarai who have emigrated from the plains, and also in the larger towns to a very small degree. Ganja is not produced in Kumaun and is very seldom used. On the first constitution of the district in 1892 there were 22 shops for the sale of hemp drugs, and subsequently that at Tanakpur was transferred to Almora, while others were opened at Naini Tal and Chorgallia. In 1896 a duty of Rs. 2 per *sér* was imposed on the import of Central Asian charas, and this was raised to Rs. 4 in 1899. As a result the drug revenue rose from Rs. 7,690 in 1891 to Rs. 15,854 in 1900. The introduction of the warehouse system also tended to swell the total inasmuch as it encouraged competition; for the contractors became aware of the consumption of the drugs in the shops of their rivals and thus learned the value of the various shops. Moreover, the farmers seized the opportunity to raise the retail price of these drugs proportionately higher than the increased dues or the license fees warranted.

While the poorer classes occasionally manufacture intoxicating drugs for their own consumption from the spontaneous growth of the hemp plant, this practice has very little effect on the revenue. There is no doubt a certain amount of smuggling in the case of charas from Almora into the Bhabar, but this has been to some extent counteracted by the opening of the shop at Chorgallia.

Opium is only cultivated to a very small extent in this district, and its use is generally unknown to the residents. There has, however, of late years been a considerable increase in opium consumption at Naini Tal and in the Tarai. Recently an experimental effort has been made to cultivate poppy in the Tarai, but the distance from the markets is too great for the crop to become of much importance. Apart from medicinal purposes, which account for the greater part of that consumed, opium is also used by Musalmans and a few low caste Hindus. In 1892 there were 30 shops licensed to sell opium, but this number has been reduced by the transfer of the shop at Tanakpur. Opium was formerly sold at the treasury and tahsils by the treasurer and his agents in the capacity of licensed vendors without any license fees. This system was abolished in 1900, and the income from licenses rose from Rs. 1,615 to Rs. 4,423 in the first year of the new arrangement, while the retail prices in Naini Tal increased to a considerable extent. Some mention may be made of the rice spirit made by the Tharus for their own consumption, and also of the barley liquor manufactured by the Bhotiya traders; the latter is imported from their own country and is not sold to others.

Since the formation of the district in 1891 the whole area has constituted a single postal circle with the head office at Naini Tal. Formerly there was but a single circle for the whole of the Kumaun and Garhwal districts, while the postal arrangements of the Tarai were conducted separately. The list of all the post-offices in the Naini Tal district, showing their class and management, will be found in the appendix. From this list it appears that there are now 22 imperial and four district offices. The latter comprise those at Betalghat in the hills, in the Bhabar, and Satarganj and Khatma in the

Tarai. The district post has a separate organization of its own, and is no longer combined with that of Almora and Garhwal. It is maintained as much for administrative purposes as for public convenience, and is the great channel of communication between the patwaris and the head office. With the exception of the mails from Kathgodam to Bareilly and the plains which are carried by the railway, the whole of the transmission is effected by foot-runners. There are four imperial mail lines in the district, from Naini Tal to Kathgodam, from Naini Tal to Ramgarh, from Kathgodam to Almora, and from Kathgodam to Ranikhet. The last two, so far as the charges are concerned, are attached to the Almora circle. The remaining mail lines are managed by the district post. They are eighteen in number, but of these only eleven are worked for the whole year. The most important include the lines from Ramnagar to Kashipur, Jaspur and Rehar in the Bijnor district; from Tanakpur to Khatima, Sitarganj, Kichha, Rudarpur, Gadarpur, Shafakhana and Kashipur, of which the portion from Tanakpur to Khatima is only open from the 1st of November to the 31st of May and that from Gadarpur to Kashipur from the 1st of October to the 31st of May; and from Haldwani to Kaladhungi and Ramnagar, the latter portion being also open for eight months only. The others include the permanent lines from Kaladhungi to Kotah in the Bhabar, from Kichha to Darao in the Tarai, and from Khairna to Betalghat in the hills, along the valley of the Kosi. The three remaining lines are temporary; they include those from Haldwani to Chorgallia, open from the 1st of November to the 15th of June; from Kaladhungi to Shafakhana from the 1st of June to the 30th of September, while the Ramnagar line is closed; and from Khatima to Neoria, open from the 1st of November to the 31st of May.

The stamp revenue in Kumaun commenced by the imposition of a fee of eight annas on all petitions filing a suit, but no institution or other fees were levied.* Subsequently a fee of eight annas was also imposed on application for copies of documents more than a year old.† Gradually, with the introduction of other reforms, came the assimilation of the procedure in stamps

* To Board, 14th November, 1820

† To Board dated 29th May 1840

to the practice of the plains, and at the present time there is no difference. The statistics of revenue and expenditure under this head since 1891 will be found in the table given in the appendix.* These figures sufficiently explain themselves and call for no further comment.

Registration was first introduced into Kumaun in 1843. At that time a maximum fee of one rupee was imposed, but now the same rate prevails as in all other districts. Up to the formation of the Naini Tal district in 1891 the Superintendent of the Talai was Registrar for that portion of the district, while there were sub-registrars at Naini Tal and Kashipur. Since 1891 the Deputy Commissioner of Naini Tal has acted as Registrar for the whole district, while subordinate to him there are sub-registrars at Naini Tal, Haldwani and Kashipur, the duties being performed by the tahsildars of these places. The average receipts from registration for the six years ending 1903 has been Rs. 3,038, and the expenditure Rs. 1,982.

The municipalities in the district comprise those of Naini Tal and Kashipur. Haldwani is no longer a municipality, for in April, 1904, it was reduced to the status of a notified area under Chapter XII, Act I of 1900. Statements will be found in the appendix showing the income and expenditure of each under the main heads for each year since 1890 in the case of Naini Tal and Kashipur, and since 1897 for Haldwani, which was raised to the status of a municipality in that year.† Some account, too has been given of the administration of Kashipur and Haldwani in the separate articles on those places, and it remains merely to deal with the origin and history of the municipality of Naini Tal itself. It should be observed that in no case is the income raised from an octroi tax on imports.

The Naini Tal municipality was first constituted on the 3rd of October 1850, and was again reconstructed under Act XV of 1873. Up to the year 1891 it was managed by a committee of six members, all nominated; in that year, however, the number was raised to eight, and in a later year to ten, at which figure it now stands. In 1901 an innovation was introduced, three of the members being then for the first time appointed by election. Up

* Appendix, Table XII.

† Appendix, Table XVI.

to the year 1890 the Senior Assistant Commissioner of Almora was president of the board and the Assistant Commissioner of Naini Tal was vice-chairman and secretary. This was an inconvenient arrangement owing to the continual absence of the president, and in 1891 the Assistant Commissioner of Naini Tal was appointed to that office, to be succeeded almost immediately by the Deputy Commissioner of the newly-formed district; and at the same time a competent paid secretary was appointed. The income of the municipality has increased steadily for the last twenty years, the growth of the population as well as that of the taxation alike contributing to this result. In 1883 the principal source of income comprised the tax on houses and buildings, the conservancy tax, the site tax, the tax on stalls in the markets, rents from Government land, tolls on carts and animals, and the octroi on animals brought in for slaughter. These taxes remained unaltered till 1891, when the tax on horses, cows and dogs came into force, to be followed next year by a tax on domestic servants. In the year 1895 taxes were raised generally; the slaughter tax on sheep was raised from four to six annas, and the cow tax was increased in the same proportion; taxes on servants, horses and dogs were doubled, and in addition new taxes were imposed on bungalows, boats, and lake-frontage at the rate of one rupee per foot. In the following year all the tolls were doubled. Since the institution of the water-works a water-rate of 7·5 per cent. on the assessed value of each house has been imposed. In 1902 a further increase was made in the tax on servants and animals, but the servant tax was abolished in 1904 and compensation effected by an increase in the tolls. This enhanced taxation is chiefly due to the indebtedness of the municipality. The debt originated in the expenditure on protective works necessitated by the landslip of 1880, in consequence of which a loan of Rs. 1,50,000 was obtained from Government. In 1893 the balance of Rs. 94,456 was entirely remitted by Government. That year, however, saw a large increase in the loan account of the municipality; for the purposes of erecting water-works and establishing a new drainage system and sewage works the Board was allowed to borrow the sum of Rs. 2,60,000, which was supplemented in the following year by an addition of Rs. 25,000. This amount was still round

to be altogether insufficient for the work which had been undertaken; the water-works had to be remodelled, and another loan was consequently obtained. This was paid in two instalments in 1897 and 1898, the total being Rs. 2,47,000. In 1899 the total indebtedness of the municipality from the loans and the accumulated interest was Rs. 5,88,333; of this, Rs. 1,38,333 were remitted by Government, and Rs. 50,000 paid off by the municipality in that year, so that the debt was reduced to four lakhs of rupees to be repaid in half-yearly instalments spread over a period of thirty years. The expenditure has increased somewhat more than proportionately with the growing income; large sums have to be spent annually on repairs, while the upkeep of drains, roads, water-supply and conservancy is a very costly matter. The drains are managed by the Public Works Department, with the exception of the roadside gutters; the municipality, however, is responsible for all expenses.

The most important work of the municipality consists of the conservancy and the disposal of the sewage. Owing to its situation, Naini Tal is particularly difficult to deal with in this respect, as nothing can be done in the station itself and all rubbish and sewage has to be taken away to a considerable distance at much labour and expense. In 1894 a scheme for the disposal of the sewage was initiated; a large pipe was constructed to carry the drainage out of the Naini Tal valley along the line of the Mall and down the cart-road through Talli Tal. The sewer ends at Rusi, some distance down the road, and there a sewage farm was set in working. A long spur of shale ground was made into terraces, the intention being that these terraces should be used in turn to receive the diluted sewage from the pipes; in this manner the surface of the entire area would become more or less saturated with the sewage deposits and the site thus enriched would be capable of cultivation. The scheme has worked with considerable success. A recurrence of epidemics of cholera and small-pox has been instrumental in bringing about a greatly improved system of conservancy in the settlement. A sharp outbreak of cholera in 1896 resulted in the meeting of a special committee convened by order of Government to consider the question of sanitation. Their report shows

that they considered the station overcrowded, at least so far as the native quarters were concerned, the arrangements for securing a pure food-supply defective, and conservancy generally bad in the matter of the non-removal of fluids and stable litter. The commission resulted in the appointment of a European Inspector and an Assistant Inspector to superintend the sanitation of the place, and various rules were put into force with respect to the bazárs, and especially the meat market. The result has been an improvement in every direction, and the work of inspection is now carried on regularly under the superintendence of officers on the district staff.

There are in the district three towns administered under the provision of Act XX of 1856, Ramnagar, Kaladhungi and Ranibagh; the last is for the purpose of the Act combined with Kathgodam to form a single area. Each of these has its own watch and ward and its own conservancy arrangements, the cost being defrayed from the ordinary assessed tax. Details of the administration will be found in the articles on the various towns.

The District Board of Naini Tal is constituted under Act XIV of 1883, and consists of sixteen members, of whom seven hold their seats by virtue of their office and the remaining nine are nominated by Government. The Deputy Commissioner is chairman and the Assistant Commissioner vice-chairman. The board came into being in January 1892.* The work of the District Board is of the usual miscellaneous description and comprises a variety of departments. It should be noticed, however, that in this district the duties of the Board under the head of public works are less expensive than usual, as all the important roads in the hills are under the direct control of the Public Works Department, and in the Tarai and Bhabar are chiefly managed by the Government Estates. The details of income and expenditure under the main heads will be seen in the table given in the appendix for all years since 1891.† These figures call for no comment, except perhaps that the

* G. O. No. $\frac{30}{IV-C-85}$, dated the 15th January, 1892.

† Appendix Table XV

income under cattle-pounds is very much larger than the general average; but this is only to be expected in Naini Tal, where so large an area consists of grazing and pasture land.

In the appendix will be found a table showing the number of schools, both secondary and primary, and the number of scholars of either sex since 1896, and also a list of all the schools of each grade in the district.* The table shows a total of 14 secondary and 68 primary schools in the district. Only one of the secondary schools and not all of the primary schools are managed by the District Board, and the figures include the numerous European schools in Naini Tal, as well as the mission and other schools which are in receipt of grants-in-aid from Government.

The European schools for boys and girls may be considered separately, as they bear no special relation to the education of the district, but are rather provincial in character, pupils coming to them from all parts of the United provinces and elsewhere. The European boys' schools in Naini Tal all rank as high schools. They include the Diocesan Boys' school, St. Joseph's Seminary, a Roman Catholic institution which also ranks as a College, the Oak Openings school on Sher-ka-danda belonging to the American Mission, the Priory and the Hermitage. The girls' schools comprise the All Saints' Diocesan high school, the Wellesley high school, also owned by the American Mission, St. Mary's Convent, and Miss Parkinson's school at Petersfield. The Naini Tal Diocesan Schools owe their origin to a project formed by Dr. Condon, Mr. H. S. Reid and others in 1869, for founding a school for the children of residents and others of small means. In July 1869 a mixed school was commenced and continued during the next year with such success that the committee decided upon enlarging the scheme and setting up two schools, one for boys and the other for girls. These schools were commenced on the 1st of February, 1871, and have met with large success. The boys' school was for some time located in the house known as Rohilla Lodge, but in 1873 Sherwood, which had been used by Sir Henry Ramsay as a residence and bought from him by General Huthwaite of the Bengal artillery,

was purchased by the committee and continued to be used as a school till 1896, when it was bought as a residence for the Lieutenant Governor. The school was then located temporarily in a building on the site of the present Secretariat. The present school building on the south-east side of Ayarpatha was begun in 1896 and completed two years later.

The aided secondary schools in the district comprise the Diamond Jubilee high school and the American Mission school^s at Naini Tal. The latter was founded in 1858, and has lately been raised to the status of a high school. The same mission has a lower middle school at Haldwani, in which also English is taught. The remaining secondary schools of the district are entirely under the control of the Board. They are only two in number, the Anglo-vernacular School at Kashipur, which is supported by the municipality, and the tahsili school at Jaspur in the Kashipur pargana, which is of the middle vernacular type.

The remaining schools of the district are either managed^F by the District Board or else are in receipt of grants-in-aid^B from Government. In the year 1891, when the district was first formed, it contained one tahsili vernacular school at Jaspur, and only thirteen village schools with a total average daily attendance of 309 pupils. There were also three unaided primary schools for girls, two of which were supported by the American Mission, and the third at Jaspur maintained by the Government Estates. These schools were all in a very unsatisfactory condition. Out of fifteen candidates sent up for the public examination only one passed the vernacular middle standard and the rest totally failed. Further, there were thirteen schools in the Bhabar and eighteen in the Tarai, which were supported by the Government Estates, but these were in an even more backward state. The Bhabar schools were then under the supervision of the missionaries of Naini Tal, while those in the Tarai were managed by the Superintendent. The reason for this state of things was that the teachers had very poor qualifications and insufficient wages, while at the same time there was very inadequate and ineffective supervision of the work done. At all times the district suffers from the migratory

habits of the population and also from the general poverty of the inhabitants in the plains parganas.

The physical characteristics of the district are such that large schools cannot be expected anywhere. In all parts the boys have often to aid in the field work and look after the cattle, so that the attendance is very irregular and unpunctual. In the Tarai the tenants are always changing from one village to another, while the climate also reacts most unfavourably on the attendance at the schools. In the Tharu villages the children will not go to school at all unless the teacher is one of their own caste, and it is very difficult to find Tharus with sufficient qualifications. In the Bhabar the great difficulty is that the population is not permanent. This has been to a great extent surmounted by transferring some of the schools to the hill villages during the hot weather and the rains. The list given in the appendix shows the summer and winter localities for such schools.

The results of all these advantages is that education is in a backward state in this district. In 1823 Mr. Traill wrote: "There are no public institutions of the nature of schools, and private tuition is almost entirely confined to the upper castes. Teachers are commonly Brahmans, who impart to the scholars the mere knowledge of reading, writing and accounts." It was not until after 1840 that a beginning was made of the present system of public schools, although there was a certain amount of private instruction. In 1857 the Kumaun circle was formed under the Department of Public Instruction, and since that date there has been marked progress. In the time of Sir Henry Ramsay education had made rapid strides in the northern parganas of Kumaun, but in those parts which now represent the Naini Tal district it was still very backward. At the present time the Naini Tal schools are under the supervision of a Sub-Deputy Inspector. Instruction is given in the Nagri character generally, but in the western Tarai schools and in Kashipur the Persian script is also taught. There are a few aided primary schools and several private schools in which religious instruction alone is given. Female education has made no great progress. There are three native schools for girls in Naini Tal, but these are unaided institutions, and there are

no vernacular schools for girls maintained from public funds. Occasionally a few girls are taught in the boys' schools of the Tharu villages in the Tarai.

The returns of the 1901 census show that 4.15 per cent. of the total population are able to read and write. In the case of the males the figure rises to 7.05 per cent., while for females it is only .52 per cent., although this is a very much higher figure than the general average of the province. At the same time Naini Tal is very far behind the other Himálayan districts of Almora, Garhwal and Dehra Dun, and further the averages are considerably exaggerated by the presence of numerous schools in Naini Tal itself. .49 per cent. of the population are literate in English, but if we eliminate the district headquarters, the proportion sinks to a very low figure indeed. Considering literacy according to religions, it appears that Hindus have made a very marked advance in this respect over the Musalmans, the proportion of the literate male population being 7.79 per cent. in the case of the former and only 3.47 per cent. for the latter. At the same time the census figures, although deceptive, clearly illustrate the recent progress of education in the district. The number of literate males in 1881 was 2.2 per cent. of the total male population, and in the succeeding twenty years it rose to 7.1 per cent., and that this actually represents a distinct progress of education is clear from the fact that similar results were obtained in the adjoining hill districts of Almora and Garhwál.

There are two schools for patwaris in the Tarai located at Kashipur and Khatima. In several cases it has been found possible to give the Tharus a sufficient education to enable them to perform the duties of a patwari, and as such they not unfrequently make excellent officials.

There are five dispensaries in the district managed by the District Board, and located at Naini Tal, Kashipur, Haldwani, Ramnagar and Kaladhungi. All of these are maintained from the local rate funds. The Naini Tal dispensary is known as the Crosthwaite hospital, and derives its name from Sir Charles Crosthwaite, at one time Lieutenant Governor of these provinces. This building which stands above the Malli Tal bazar was erected in 1895 and took the place of the old native hospitals,

the cost of building being defrayed from local subscriptions. Besides the hospital for males there is also a hospital for females in the same building, which is supported by subscriptions and also by a grant from Government. The male hospital was also till recently the police hospital for the district; but in 1902 a separate building was taken for this purpose near the Roman Catholic chapel, and this serves for a police hospital for the whole Kumaun division. In addition to the District Board dispensaries there is in Naini Tal the Ramsay Hospital, a State-aided institution for Europeans and Eurasians. The project for the construction of this hospital was first mooted in September 1888, and the hospital was built by subscriptions raised throughout the province. It is in part self-supporting, but it receives a grant-in-aid from Government and is further maintained by annual subscriptions. In the Tarai there are five dispensaries maintained by the Government estates. These are all fairly recent institutions, as up to 1886 there were no dispensaries in the Tarai at all, although at each tahsil medicines were distributed by compounders. The present hospitals are located at Bazpur, Kichha, Gadarpur, Sitarganj and Khatima. In the Bhabar the income of the cultivators' medicine fund is used for the purchase of medicines for distribution by officers on tour, peshkars, and selected padhāns, while in the Tarai a special grant is made yearly for this purpose. The whole of the medical arrangements of the district are under the supervision of the Civil Surgeon.

In this connection we may deal briefly with the most prevalent diseases in Naini Tal. The table given in the appendix shows the chief causes of death; * and from this it will appear that fever as usual heads the list, being responsible on an average for 73·18 per cent. of the total mortality. From the same table it will be seen that 3·15 per cent. of the average mortality is caused by bowel complaints, which are almost invariably connected with malarial fever. The figures for 1891 are those for the old Tarai district only, and in that year the number of deaths from these two causes amounted to no less than 96 per cent. of the recorded mortality from which it appears

that the hill pattis are in this respect comparatively healthy. The climate of the Bhabar is notoriously bad; but then it must be remembered that this tract is almost uninhabited during the unhealthy portion of the year, while there is also no doubt that a very great improvement has been effected in the climate in those parts where the clearings are of old standing and the cultivation permanent.

The district is from time to time visited by severe epidemics of cholera. On an average this disease accounts for 2·4 per cent. of the total mortality, but in ordinary years the figure is much lower. It has been raised out of all proportion by the severe epidemic of 1892, which carried off 2,563 persons, and also by that of 1896, when there were 1,485 deaths from cholera. Another epidemic of some intensity occurred in 1902, when 555 persons died of this disease. These outbreaks often coincide with the breaking up of the great Hardwar fair, and this was especially noticeable in the great cholera years of 1857, 1867 and 1879. The disease, too, is often introduced by the pilgrims to the shrines of Garhwál, who pass through the district in large numbers. Small-pox is never very prevalent in the district, and there have been no severe epidemics of late years. From 1898 to 1903 the total mortality from this cause was only fifteen. In former days small-pox was a characteristic disease of the hills, but in 1854 vaccination was introduced into Kumaun under Government supervision and the results have been most beneficial; although far behind Garhwál and Almora, which are the best protected districts in the United Provinces, Naini Tal holds a very satisfactory position in this respect. There are now sixteen vaccinators in the district under the control of an assistant superintendent of vaccination. It was estimated in 1902 that 24·37 per cent. of the population was protected by vaccination. Plague has not yet appeared in the district, and the hill pattis do not suffer from the endemic form of this disease, which constantly appears in Almora and Garhwál.

In 1902 a plot of land was taken over from the Forest Department at Patwa Dunga, a village on the cart-road from Naini Tal to the Brewery, at a distance of $7\frac{1}{2}$ miles from the former, for the purpose of establishing a calf lymph depôt for

the provision of lymph for the whole of the United Provinces. The buildings were commenced in 1803 and completed in the following year at an approximate cost of Rs. 50,000. They stand in a chir forest on the edge of a cliff overlooking the plains, at a height of 5,000 feet. The institution consists of a bungalow for the Deputy Sanitary Commissioner, 2nd Circle, who is in charge; a house for the resident Assistant Surgeon; the operating-room and laboratory, where the calves are vaccinated, and the lymph collected and stored; and the stables. The water supply is provided from pipes leading down the cart-road from Naini Tal. The work is slack during the hot weather; but it is estimated that in September, October, and November an average of 15,000 tubes of lymph will be sent out monthly. The object in view is to ensure a sufficient supply so as gradually to supersede human lymph and arm-to-arm vaccination.

In the census report of 1901 statements are given of the number of persons suffering from infirmities. These include insanity, deaf-mutism, blindness and leprosy. In Naini Tal there were only 798 persons thus affected, a smaller figure than in any other district except Dehra Dún. Insanity is very rare, and only 27 persons were recorded as insane at the census. The figures for blindness, too, are much lower than in any district except Dehra Dún, the total being 454 persons. Deaf-mutes numbered 206, which is considerably below the Provincial average. The figures for leprosy are also small, amounting to 111 in all, and contrast remarkably with those of Almora and Garhwál, but the returns may be affected by the presence of the leper asylum at Almora, as Act III of 1898 has been applied to this district. It has been observed that deaf-mutism is chiefly confined to the hill patti of Naini Tal, and this fact has been adduced in testimony of the theory that the affliction is intimately connected with goitre, a very common disease in all parts of the hills.

The management of the cattle-pounds in Naini Tal differs in several ways from the system adopted in other districts. Those in the municipal towns are, as usual, under municipal control, and the receipts are credited and the expenditure charged to the boards' funds. There are three of these at

Naini Tal, Kashipur, and Haldwani, of which that at Kashipur brings in an income of Rs. 1,600 annually; that at Haldwani Rs. 1,525; and that at Naini Tal only Rs. 50. There are no pounds in the hill pattis, but a large number are maintained in the Tarai and Bhabar. These are managed by the estates; but in the case of the Tarai the income is credited to the District Board and the expenditure is met from the Board's budget; while in the Bhabar the estates take the whole of the income and are charged with the whole expenditure. There are altogether 55 of these pounds, of which two at Jaspur and Raipur are in the Kashipur pargana, 34 in the Tarai and 29 in the Bhabar. Of the Tarai pounds, 18 are permanently maintained and 16 are only temporary. In the Bhabar they are all permanent, except those at Rausali, Simolia and Garjia, which are only maintained during the cold weather. The Tarai pounds bring in an annual income, including those in the Kashipur pargana, of Rs. 12,713; and those in the Bhabar Rs. 7,459.

CHAPTER V.

HISTORY.

Materials for the early history of the district are scanty. The hill patts belong to the rest of Kumaun and have shared in the changes of dynasty to which it has been subject. It is generally supposed that the Khas Rajputs of the Himálayan tracts are connected with the Khasas or people of Kasia which Ptolemy places in the western Himálayas.* They are also mentioned in the Mahabharata, and in Manu they are placed near the Daradas or Dards, who still give a name to Dardistan. Nothing is known of their migration to the east, but the name is found throughout the Himálayas as far as Assam. Dhikuli in the Bhabar is locally said to represent Vairat-patan or Vairatnagar, the capital of a Pandava kingdom, and the whole story of the Mahabharata has been transferred to the hills. In the Tarai runs and ancient mounds have been discovered, but have not been excavated. The best known of these is the so-called fort of Ujain near the modern town of Kashipur. A tank in the neighbourhood, known as the Drona-sagar, is popularly believed to have been made by the five Pandu brothers for their teacher, Drona.

General Cunningham identified the mound of Ujain with the capital town of the kingdom of Kiu-pi-shwong-na of Hiuen Tsiang, which is transliterated Govisana, but there is no positive confirmation of the identity.† A few years ago some inscribed bricks or stones were found built into a modern house in Kashipur, recording the names of pious founders of some buildings to which they had belonged. The type of the letters would indicate the third or fourth century A.D. The Chinese pilgrim in

* McCrindle's Ptolemy p 303

† C. A. S. R. I. pp 231-235. Rec. Buddh. Records I. p 199. Cunningham

the seventh century describes another kingdom named Brahmapura, situated entirely in the hills which must have included part of Kumaun. It produced copper and rock crystal, and far to the north in the snowy mountains gold was found.

We have no information as to the disappearance of Buddhism in this district, and from the time of the traveller Huen Tsiang the history is a blank for a considerable period. Nothing can be said of the intervening time, for there are no records extant prior to the formation of the Katyuri kingdom in the interior of Kumaun. We know very little of the state of the Naini Tal district during the rule of these Katyuri Rajas, as after the establishment of the Muhammadan empire in Hindostan the Kumaun Rajas were found in hereditary possession of the Tarai by a tenure quite independent of any grant from lowland potentates, so that there seems no reason for doubting that the whole Tarai formed an integral part of the Katyuri dominions. It is still a matter of necessity that a large portion of the plain country should, if not attached to the hills, be available for the annual resort of the hillmen and their cattle, and this occupancy under native rulers could hardly be maintained without an actual right of property in the soil. There is nothing, however, to show us that during Katyuri times there was either such communication with the plains or such a surplus population in the hills as would enable them to colonize the Tarai. On the other hand, everything that we know indicates that from the seventh to the eleventh centuries the Tarai had relapsed into its original state of forest and its towns were deserted and allowed to fall to ruin; it was not in fact till the sixteenth century that the hill State attempted to exercise any practical control over any part of the lowlands beyond the strip close to the foot of the hills known as the Bhabar. Moreover, the Katyuris were not altogether paramount in the Naini Tal district. Dhaniyakot, like Phaldakot, was in the hands of a tribe of Kathi Rajputs who claim to be of Surajbansi origin. Kotah, Chhakhata, Kutauli and the remaining pattis to the south were subject to the leading Khasiya families, and these people consequently extended their influence, so far as we can surmise, over the low countries at the base of the hills.

While Kumaun was thus broken up into a number of petty principalities, the Sombansi family of Chands established themselves in Kali Kumaun. The origin of this family and the greater part of their doings belong properly to the history of Almora, and in the following account only those incidents will be mentioned which have any direct bearing on the history of the tract now known as the district of Naini Tal. The traditional founder of the family was Som Chand of Jhuzi in Allahabad. The story goes that he married the daughter of Raja Brahma Deo, the Katyuri of Kumaun, and received as dowry a small estate in Champawat and considerable grants in the Bhabar and Tarai; but he seems to have been a very mythical personage. The family estates were confined to Kali Kumaun and perhaps the Dhyaniirau pargana for many generations. Eighth in descent from Som Chand came Bina Chand, who died childless in 926 A.D. or according to another account in 855, and his death was the signal for a revolt of the Khasiya population. The Khasiya rule lasted for some 225 years, and during this period they were probably supreme throughout the hill patts of this district, for the Katyuri Rajas of Kumaun proper never then held sway so far south. At the outbreak of the revolution the Chands who survived retired to the Mal or Tarai, and in the course of time Bina Chand regained Kali Kumaun and established himself in Champawat, where he settled for a while the eternal quarrels of the two factions of Maras and Phartiyals.

From Bina onwards we have nothing but a list of Rajas, 19 in number, lasting till 1374 A.D. Local tradition says that Triloki Chand, 14th in descent from Bina Chand, annexed Chhakhata and built a fort at Bhim Tal to protect his frontiers towards Pali and Barahmandal of Almora, where the Kathis and Katyuris were still independent. Turning to the Musalman historians, we find in Yahya bin Ahmad that when Khargu, the Katehriya chief who murdered Saiyid Muhammad of Budaun, fled before Firoz Tughlaq in 1380, he took refuge in the country of the Mahatas of Kumaun, who were attacked and defeated by the Sultan presumably in the Tarai.* In 1418 Khizr Khan pursued the rebel Raja Hari Singh across the Ramganga, but was

baulked in his pursuit by the terrors of the mountains.* From these and other casual notices we gather that the Hindus of Katehr were gradually giving way before the Musalmans, and pressing back towards the hills must have encroached upon the possessions of the hillmen.

Gyan Chand acceded to the throne of Kali Kumaun in 1374; that is the traditional date, but an extant copperplate ascribes this ruler to the year 1367. He deemed it his first duty to proceed to Dehli and petition the Sultan for the grant of the tract along the foot of the hills which had of old belonged to the Katyuri Rajas. He was received with honour, and obtained all the Bhabar and Tarai as far as the Ganges. Shortly afterwards the Bhabar Tallades was seized by the Governor of Sambhal; but Gyan Chand, who had received the title of Garur from the Sultan, sent his favourite officer, Nalu Kathayat, to expel the intruders, and this commander recovered the entire tract. He was rewarded with a grant of land in the Bhabar and in Dhyaniiran. His honours excited the jealousy of Jassa of Kamlekh, another favourite, and in consequence of his representations Nalu was sent to the Bhabar as governor. The climate was no better then than now, and Nalu protested, but was sent away in disgrace. Jassa proceeded further by blinding the two sons of Nalu, whereupon he roused the Maras, captured Jassa, and slew him. He also captured the Raja, but spared him. His generosity was ill-requited, for some time afterwards Nalu was put to death. Gyan Chand died in 1419, after a reign of 45 years, and was succeeded for a few months by his son, Harihar Chand.

Udhyan Chand succeeded his father, Harihar, in 1420, and immediately set about extending his dominions. He captured successively the forts held by the Padyar Raja of Chaugarkha in Almora, the Raja of Mahruri and the Raja of Bisaud in this district. His possessions extended from the Sarju on the north to the Tarai on the south and from the Kali westwards to the Kosi and Sual. Ramgarh and Kotah were still held by a Khasiya family. Udhyan Chand reigned only one year, and was succeeded by his son, Atma, and his grandson, Hari, each of

whom, according to the chronicles, reigned but one year. Hari was followed by Vikrama Chand in 1443, but we have no records of this reign referring to the Naini Tal district. In 1437 his nephew, Bharati, rebelled against him and seized the throne. For twelve years he was engaged in war with Sira and Shor on the left bank of the Sarju. His son, Ratan Chānd, was left in charge of Kali Kumaun and the Bhabar, and invoked the aid of the Raja of Katehr to help him in defeating the Raja of Doti. Ratan Chand succeeded his father in 1462 and reigned till 1468, but he had little to do with this district.

Kirati Chand, who succeeded to the throne of Kali Kumaun in 1488, was chiefly engaged in war with the Katyuris of Pali and paid little attention to the southern tracts till this task was accomplished. He then overthrew the Kathi Raja of Phaldakot, and afterwards took possession of Kotah and Kuttauli and returned to Champawat by Dhyaniarau, consolidating his conquest by the appointment of administrative officers as he went. His next expedition was towards the low country, where he established a post near Jaspur in the Kashipur pargana and called it Kiratipur after his own name. Thus the whole of the Naini Tal district passed under the rule of the Chands. Raja Kirati, the most active and successful prince of his family, died in 1503, and was succeeded by his son, Partab Chand. The latter died in 1517 and was succeeded by his son, Tara Chand, who, after an interval of sixteen years, was followed by Manik Chand in 1533. During the reign of Manik Chand, Khawas Khan, an opponent of Islam Shah in the year 1541, retreated to the foot of the Kumaun hills and thence ravaged the royal territories in their vicinity. He eventually sought the protection of the Raja of Kumaun, who gave him some villages for his support. The subahdar of Sambhal was ordered to get him into his possession by any possible means, but the Raja constantly protected him. Finally, Khawas Khan gave himself up on promise of forgiveness by Islam Shah, but he was immediately put to death.* Manik Chand was succeeded by his son, Kalyan Chand,* who died after a short reign of nine years and was followed by Puran Chand, who was again succeeded by Bhishma Chand in 1555.

Bhishma Chand or Bhikam Chand had no son, and adopted a son of Tara Chand, named Kalyan, who was commonly known as Balo Kalyan Chand. The Raja, who was troubled by risings in Pali and Syunara, became convinced that he needed a more central capital than Champawat and selected the old fort of Khagmāra. No sooner had he made this decision than one Gajawa, the Khasiya of Ramgarh, who was semi-independent and had escaped the hands of Kirati Chand, determined to revenge the wrongs of the Khasiyas. He assembled a large number of his clansmen, and coming unawares on the old Raja as he tranquilly slept in the Khagmāra fort slew him and his followers. The triumph of the Khasiyas was very shortlived, for as soon as Balo Kalyan heard the news he made peace with the Dotiyals and hastening to Ramgarh and Khagmāra took exemplary vengeance on all the Khasiyas in the neighbourhood. This occurred in 1560. Balo Kalyan then made Khagmāra his capital under the name of Almora. The Raja was occupied throughout his reign in extending and consolidating his possessions in northern Kumaun, and we have no references to this district.

He was succeeded in 1565 by his young son, Rudra Chand. Shortly after his accession the Tarai and Bhabar were occupied by the Musalman governor of Kant-o-Gola, who was probably Husain Khan Tukriya, though he was not appointed till 1568.* From Ferishta we learn that at this time the Musalmans considered the Kumaunis to be very wealthy. He writes: "The Raja of Kumaun possesses an extensive dominion, and a considerable quantity of gold is procured by washing the earth mounds in his country, which also possesses copper mines. His territory stretches to the north as far as Tibet and on the south to Sambhal, which is included in India."† On the strength of the current rumours Husain Khan Tukriya proceeded through Oudh to the hills; but the hillmen as usual abandoned the low country after a slight resistance and fled to their mountain fastnesses. Husain Khan suffered many losses from the climate and his inexperience of hill warfare and retired to Oudh.‡ It would seem, however, that this first expedition was directed

* *Asiatick Researches* I, 873† Briggs' *Ferishta* IV 547

‡ Elliot V 468 496

only against the Nepal Tarai. He made a second attempt in 1575, and then devoted all his efforts to gaining possession of Basantpur in the Eastern Dun, being merely actuated by religious zeal and love of plunder. Though he held the Tarai, there is nothing to show that he ever penetrated into Kumaun. Owing to his exacting behaviour towards the Hindus, he was recalled by Akbar and died of his wounds at Dehli. Sultan Ibrahim of Anba, another of Akbar's nobles, is credited with the conquest of Kumaun and the Daman-i-Koh, as the tract along the foot of the hills was styled by the Musalman historians.

The story goes that shortly after the death of Husain Khan the Raja collected a force which he led in person to the Tarai and expelled the Musalmans. Complaints of this reached Dehli, and a strong reinforcement was sent to the governor of Katehr. Rudra Chand, knowing that he could not withstand the enemy in the open field, offered to decide the question of the Tarai sovereignty by single combat, and was victorious. It is further recorded that Akbar thereupon invited the Raja to Lahore and employed him in the siege of Nagor giving him in return for his services a grant of the Tarai parganas. This visit is attested by Budaoni, who gives 1538 as the date.*

The tract lying along the foot of the hills has, as we have seen, been growing gradually in importance. From the Musalman historians and general tradition we gather that in the eleventh century this stretch of country was covered with dense forests interspersed with patches of grazing and cultivation. The people were chiefly occupied in pasturing cattle, the scant cultivation being barely sufficient for their wants. Rude temporary dwelling-places were the rule, but there were forts to which the graziers could fly in times of danger. It was not till a hundred years later that the Rajputs entered Katehr and gave it their name. These, harassed in turn by the Musalmans, crossed the Ramganga and brought much of the forest land under cultivation. Although early in the fifteenth century Garur Gyan Chand and his son, Udhyan Chand, are

said to have claimed an ancient right over this territory, it is clear that this assertion had the faintest possible foundation in fact. The inhabitants of the lower pattis, from the earliest times, had undoubtedly recourse to the Bhabar, as at present, for grazing purposes, but these very pattis did not come into the possession of the Chands till the conquests of Ratan Chand and Kirati Chand in the sixteenth century. The southern portion of the lowlands or the Tarai proper was first permanently annexed by Rudra Chand, who was the first to take measures to ensure the obedience of the semi-barbarous nomad tribes to the central authority.

In the *Ain-i-Akbari* we find a Sarkar of Kumaun, but it is very difficult to identify the mahals of Akbar with the present parganas and pattis of this district. The mahals enumerated seem to be confined to the submontane tract, for no single name can be identified with any portion of the hills, which according to tradition were exempt from revenue on account of their poverty. Of the 21 Akbari mahals of Kumaun, it is suggested that Bhukasi or Bhakasa represent Bhuksar, the present Rudarpur and Kilpuri; Sahajgar is the old name of Jaspur; Gazarpur is probably Gadarpur; Sitachor, Malachor and Kamus parts of the Bhabar; Bhakti may be Bakhshi, the old name of Nanakmata; and for Chattki we might suggest Chinki, later known as Sarbna. The others lay in Pilibhit, Kheri, Bareilly, Rampur, Moradabad and Bijnor. The revenue for this district would thus be 69,37,700 dams or Rs. 1,73,445, several mahals, such as Sahajgar and Gazarpur, yielding no revenue. The portion of the Tarai that came into the possession of Rudra Chand was called the Chaurasi or Naulakhiya Mal, the former name being due to its supposed length of 84 kos from the Sarda to the Pila Nadi, and the latter from the revenue of nine lakhs assessed upon it. The fiscal subdivisions were Sahajgar or Jaspur, Bhuksar, Gadarpur, Chinki, Bakhshi, Mundiya, now known as Bazpur, and Kotah, which included Kashipur. Rudra Chand himself founded Rudarpur, and established governors in each pargana. It was one of these, Kashinath Adhikari by name who founded Kashipur, probably in 1639

Rudra Chand for the rest of his reign was engaged in the conquest of Sira and Katyur, and an unsuccessful attempt on Badhangarh of Garhwál. He died in 1597, and was succeeded by his son, Lakhshmi Chand, who was made Raja in place of his blind elder brother, Sakti Goshain, who reorganized the fiscal administration of the country of Kumann and filled the Raja's treasury. Lakhshmi Chand confined his attention to his hill dominions, making war on Garhwál as usual, and building many temples. On one occasion, however, he descended from the hills on a visit to Jahangir, who received him favourably. He died in 1621 and was succeeded by his son, Dalip Chand. This prince had an uneventful reign of three years, and died, leaving twenty-one sons, of whom Bijaya Chand succeeded him as Raja in 1624. Bijaya Chand married a Bargujar of Anupshahr; he was entirely in the hands of his ministers, and at their instigation murdered all his relatives on whom he could lay hands. One of these, Trimal Chand, his brother, escaped and became Raja after the murder of Bijaya Chand in 1625.

Trimal Chand had no son and adopted Baz, a son of Nil Goshain, another son of Lakhshmi Chand, who had been blinded by the usurping ministers. Baz Bahadur Chand, as he was styled, succeeded his adoptive father in 1638. During his reign the Tarai is said to have attained to great prosperity and to have actually yielded the traditional nine lakhs of revenue. This prosperity, however, excited the envy of the rulers of Katehr, who, with the connivance of the Mughal authority, gradually occupied the border villages. Baz Bahadur thereupon resolved to go to Dehli and invoke the aid of Shahjahan.

On his arrival he obtained an audience and presented his petition supported by many valuable presents, and was told to join the army then (1654-55 A.D.) proceeding against Garhwál. The Raja obeyed and in this expedition so distinguished himself that on his return to Dehli he was honoured by many signal marks of imperial favour and received the title of Bahadur and the right of having the great drum (*nakkara*) beaten before him. But not content with obtaining empty titles he is said to have adhered to the original object of his visit and procured the full recognition of his right to the Chaurasi Mal,

together with an order* addressed to the governor of the province for effectual aid against the Katehr chiefs. In this order Baz Bahadur was styled zamíndár of Kumaun. Rustam Khan, the founder of Moradabad and representative of the Emperor, aided the Raja, who succeeded in expelling his enemies and regaining possession of the Tarai. He then founded the town of Bázipur and appointed governors and a regular establishment to carry on the administration.

Baz Bahadur's orders regarding the government of the Tarai were carefully executed by his officers. They were directed to make Rudarpur and Bazpur their residence during the cold weather and Barakheri and Kotah, on the spurs of the outer ranges of hills, their headquarters during the hot weather and the rains. Batten notices that† "at Kotah, Barakheri and elsewhere in the lower hills are remains of forts and residences and mango groves which go far to show that the climate at those sites was not in former times so insalubrious as at present, when few men in power would confine their retreat from the Tarai heat to such low elevations in the mountains as these. Kotah, indeed, is stated to have been the capital for all the western portion of the Chaurási Mal and to have given its name to the lower parganas, and not only as now to the sub-montane region." Having perfected his arrangements in the plains, the Raja returned to Almora and there introduced the customs and fashions that he had seen in the camp of his friend, Khakíl-ullah Khan. He brought with him a considerable Musalman following, some of whom he employed as drummers (*nak-kárchí*), others as javelin-men (*chobdárs*) and others as actors and mimics (*bahurúpiya*). Amongst them were certain Heris whom he settled in the Tarai as guards, and gave them land and the right to certain dues in lieu of a fixed salary. These were the ancestors of the thieving tribe of the same name, who gave

* It is strange that not one of these *farmáns* has survived, nor has any European ever been able to see even a copy of one. It is very unlikely that they were ever granted or, for that matter, asked for, as the zamindars of Kumaun held not only their hill, but also their plains possessions, independent of any title from Dehli by the right of occupancy of a tract of little value to anyone else

† Report, Kumaun, p. 163

so much trouble to the administrators of the Tarai down to recent times. He assigned for the support of his household the revenues of specified villages and irrigated lands instead of a general tax on the whole country. Thus in this district to a number of outlying villages known as pargana Mahruri was assigned the duty of carrying ammunition in time of war. Further, Baz Bahadur in 1672 introduced a poll-tax, the proceeds of which were regularly remitted as tribute to the Emperor at Dehli.

Baz Bahadur was also engaged in war with Garhwal, attaining some measure of success there; he then conquered the Bhotiya mahals, and later attacked the Garhwal Bhabar in 1672, on which occasion he is said to have plundered even Nagfna in Bijnor. He died in 1678, and was succeeded by his son, Udyot Chand. This prince was long engaged in war with Garhwal and Doti, and was attended generally by success. He took a great interest in the management of his estates along the foot of the hills, and to him are attributed the numerous mango groves of the Kotah Bhabar. He died in 1698, leaving the kingdom to his son, Gyan Chand. This Raja also fought constantly with his neighbours on both sides. In 1704 he sent his forces into the Bhabar, probably that of Tallades, and ravaged the low country of Doti. He died in 1708, and was succeeded by Jagat Chand. This prince fought successfully with Garhwal, driving the Raja to Dehra Dun. He was a good ruler and much beloved. In his days, the revenue of the Tarai is again mentioned as having been nine lakhs of rupees; but after this epoch, intestine disturbances became utterly destructive of all prosperity both in the lowlands and the hills. He died in 1720, and was succeeded by Debi Chand who, according to some, was his illegitimate son.

Debi Chand was a thriftless and incapable prince, during whose reign the Garhwalis recovered their lost possessions and even invaded Kumaun. His principal advisers were the Gaira Bishts, Manik and Puran Mal, and through their influence he was induced to take a part in the political struggles of the plains. He received into his service Dand Khan, the Afghan, and supported one Sabir Shah a pretender to the throne of Dehli. Azmat-ullah Khan was sent from the capital to take

possession of Rudarpur and Kashipur, and Debi Chand marched down from Almora to aid Daud Khan, who commanded the levies in the plains. He met the Imperial forces near Nagina, but he was there deserted by Daud Khan, who had received a bribe from Azmat-ullah. The Kumannis were defeated, and Daud attempted to seize the person of the Raja, but the latter retreated to Thakurdwara and pretending ignorance of the treachery invited Daud to attend him; the Afghan obeyed and was promptly murdered. Debi Chand then made peace with Doti, and left the war in Garhwál to his officers, himself retiring to Debipur in Kotah, where he had built a country house. Here he remained for the cold weather of three years, and here, too, he was murdered by Ranjit Patoliya at the instigation of the Bishts in 1726. The ministers then placed on the throne Ajit Chand, the son of Raja Narpat Singh of Katehr, who had married a daughter of Gyan Chand. The whole power, however, was in the hands of the Bishts, who in 1729 put Ajit Chand to death. Thereupon the two parties of Maras and Phartiyals for once united, and after a long search found one Kalyan Chand of the family of Narayan Chand living in Doti. Him they brought to Almora, and installed as Raja under the name of Kalyan Chand.

Kalyan Chand became Raja of Kumaun in 1730, and put an end to the Bisht usurpation. He had little to do with this district, but soon after his accession he took steps to secure himself by removing all rivals and sent executioners throughout the land to slay all that bore the name of Chand. Every one was slain who had even the bare reputation of being of Chand descent, and his spies were present in every village. The voice of wailing was heard throughout Kumaun, from Danpur in the north to distant Kotah in this district. He resided in Almora, or rather at his favourite country residence of Binsar, but he had little time for leisure, as the officers of Nawab Mansur Ali Khan of Oudh had taken possession of Sarbna and Bilheri and threatened the remainder of the Tarai. Kalyan Chand appointed Shib Deo Joshi his viceroy in the plains, and for some time this able officer made arrangements which put an end to the encroachments of the Oudh power. During the Rastela

persecution in the earlier years of this reign, one Himmat Goshain, blinded and otherwise injured, fled to the plains and now assembled a force of lowlanders and Kumaunis to attack the tyrannical Raja. Kalyan Chand marched against the invaders and defeated them near Kashipur; thereupon Himmat Goshain retired for refuge to the Court of Ali Muhammad Khan, the Rohilla chief of Aonla. Ali Muhammad still remembered the murder of his patron, Daud Khan, and gladly welcomed the fugitive. Thereupon, hearing of this, the Raja felt that his conduct had made him many enemies, and set about reforming his administration. He began by dismissing his old advisers and gave full power to Shib Deo Joshi of Jijhar in the Tarai, to Ramadatta Adhikari in the Kotah Bhabar, and to Hari Ram Joshi in Almora. He also bestowed lands on the families of his victims and endeavoured in every way to blot out the remembrance of his cruelty. His position was now critical, for the forces of Oudh and the Rohillas opposed him on his southern frontier; while on the east he was still troubled by the Raja of Doti. In order to secure his aims, Kalyan Chand despatched assassins into the Rohilla camp, who murdered Himmat Goshain and his family; but this act had an opposite effect to that intended.

Ali Muhammad Khan was enraged at the murder of a guest within his own camp, and in 1743 sent a force of 10,000 men under the command of Hafiz Rahmat Khan, Painda Khan and Bakhshi Sardar Khan to invade Kumaun. He collected stores and carriage of all descriptions at Kashipur for the use of the expedition, and also forbade any one to join the army that was not enrolled. On his side everything was done that could conduce to success, while on the other side, although Ramadatta sent timely notice to his master and Shib Deo Joshi asked for money and promised that if he got it, the Rohillas should not invade Kumaun, nothing was done by the Raja. The latter was persuaded that Shib Deo wanted the money only to pay off his debts, and though he made some feeble attempts to fortify the hill passes and broke down the few bridges that existed he sent no assistance to his officers. The Rohillas defeated Shib Deo at Rudarpur in the Tarai and obliged him to take refuge in

the fort of Barakheri below Bhim Tal; Hafiz Rahmat Khan left a governor in Rudarpur and went in pursuit of the Kumaonis, occupying Bijaipur in pargana Chhakhala on the outer range of the hills near Haldwani. The Raja became alarmed at the success of the invaders, at length sent a force to support Shib Deo and attacked the Rohillas in Bijaipur, but the Kumaonis fled at the first charge of the enemy, and were pursued by Ramgarh and Peora to the Sual river below Almora. Bakhshi Sardar Khan being of advanced age remained in command of a party in the Barakheri fort which commanded the route from the plains, while Hafiz Rahmat Khan proceeded to Almora and occupied it. The Musalmans throughout their expedition laid waste and plundered the whole country, destroying all the idols in the temples and taking away all the ornaments; the temple at Bhim Tal and many other places in Almora to the present day bear witness to the damage done. The climate, however, was adverse to the Rohillas, many of whom sickened and died, and though Ali Muhammad came himself to encourage his troops they became utterly disgusted at their position and longed to return to the plains.

Shib Deo Joshi collected a force in Sarbna and joined his master, but was utterly defeated in Kairarau of the Almora district. After this the Raja of Garhwal who had joined Kalyan Chand agreed to pay three lakhs of rupees, and the Rohillas consented to abandon the country. After a stay of seven months in the hills they returned to the plains, leaving a small garrison in Barakheri, to the disgust of Ali Muhammad, who had intended to make a permanent occupation of the hill country. Three months later, while pressed by the troops of Muhammad Shah, the Rohillas under Najib Khan strengthened the garrison of Barakheri and sent a small detachment by the Kosi to penetrate into the interior and form a basis of support in case the Afghans should be obliged to retire to the hills. Nevertheless, in the beginning of 1745, Shib Deo attacked the main body of the Rohillas under Rajab Khan close to the Barakheri fort, and after an obstinate struggle compelled them to retire to the plains, whereupon the other parties also retreated from the hills. About this time Kalyan Chand sent an envoy

to Dehli, complaining to the Emperor of the tyranny of the Afghans towards the Hindus. Ali Muhammad had also quarrelled with Safdar Jang and a large army was assembled for the expulsion of the Afghans at Sambhal in Moradabad. Kalyan Chand thereupon went in person to meet the Emperor; he met Shib Deo at Ramnagar and took him in his train which was increased at Kashipur by a guard of honour sent him by the Wazir Qamar-ud-din. The Raja was admitted to an interview and the Emperor granted all that was asked for, and is said to have given Kalyan Chand a fresh sanad for his possession in the plains.

This success was somewhat discounted by the fact that the Raja while in the imperial camp had omitted to pay a formal visit to Safdar Jang—an act which the Oudh Nawab never forgave. Shib Deo Joshi was invested with full authority in the plains and was about to repair the ravages which had been committed during his absence, but had not got as far as Sarbna when that pargana was occupied by Oudh forces under the express orders of the Nawab himself. Shib Deo wrote to the Nawab pointing out that this pargana had always belonged to Kumaun and was included in the sanad just given by the Emperor. This had no effect, and recourse was made to arms. In a battle with the Oudh Chakladar, Teju Gaur, the Joshi was wounded and taken prisoner, and remained for a whole year a captive in Oudh. Kalyan Chand thereupon complained to the Emperor, who induced Safdar Jang to restore Sarbna and release Shib Deo; the latter again assumed control of the administration and, in order to strengthen his frontier, built forts at Rudarpur and Kashipur, placing a considerable garrison in them, each under a separate governor. Sarbna, Bilheri and Dhaner were given in zamindari to a Barwaik family and the Bhabar Tallades was handed over to the Luls of Kali Kumaun.

Kalyan Chand was now smitten with blindness, and finding his end approaching summoned Shib Deo to Almora and placed him in charge of his young son, who was installed as Raja of Kumaun under the name of Dip Chand with Shib Deo as regent at the close of the year 1747. Kalyan Chand died early in the next year in which both M Shah and Ali M

Khan passed away. Shib Deo appointed his own son, Jai Kishan, as his Deputy in Almora and again proceeded to the Tarai, where he made his cousin, Hari Ram Joshi, governor of Kashipur, while he himself took his quarters in Rudarpur. Hari Ram, however, neglected his duties, and consequently Siromani Das, a Brahman of Bazpur, was sent to Kashipur in his place. At this time the Emperor called on all his subjects to assist him against the Mahrattas, and Hari Ram and Birbal Negi were sent with 4,000 men to the Emperor's support and took part in the battle of Panipat, which occurred in January 1761. Shib Deo also sent his son, Harak Deo Joshi, to hold Najibabad, while Najib-ud-daula was absent. At Panipat the Kumaunis were brigaded with their old enemies, the Rohillas, under Hafiz Rahmat Khan and did good service. After the battle the Emperor sent for the Kumauni leader, but Hafiz Rahmat, for reasons of his own, had previously sent off Hari Ram with presents as if from the Emperor, and in addition sent his own turban to exchange with Dip Chand, excusing the absence of the hillmen to the Emperor on the ground that he had advised them to return home because of the climate.

The history of Dip Chand is of considerable importance in the narrative of events in Kumaun, but the references to this district are not very numerous. He was a man of mild, weak temperament, generous and kind to a fault, and beloved by all that came in contact with him. He was entirely in the hands of the priests, and we have more memorials of his reign in the shape of grant of lands to temples than of any of his predecessors. Most of these, however, belonged to the Almora district, the only notable exception being that of the Bhimeshwar temple at Bhim Tal. In the earlier years of his reign he had ministers on whom he could rely, and up to 1762 peace and prosperity reigned throughout his dominions. The lowlands were in a flourishing state, and the Kumauni leaders cultivated friendly relations with Hafiz Rahmat Khan, Najib-ud-daula and the Imperial governor of Moradabad. Shib Deo and Hari Ram remained in the plains and kept up a standing army there, consisting for the most part of mercenaries from Jammu, Nagarkot, Guler and Barhapura, who so protected the people that numerous emigrants

sought the shelter of the Kumaun authority in the Tarai. At this time the principal cultivators were the Tharus, Bhnksas and Barwaiks, with a considerable admixture of settlers from the south, both Hindus and Musalmans. The only tax imposed was one-sixth of the produce, and in unfavourable seasons even this was remitted. Hari Ram was obliged to leave Rudarpur during the rains, but Shib Deo remained all the year round at Kashipur. The latter was soon called away to quell the rebellion of Amar Singh and shortly afterwards war occurred between Kumaun and Garhwál.

No sooner was this quarrel settled than internal commotions arose in Kumaun itself. Hari Ram Joshi was always jealous of Shib Deo's reputation and power. When first appointed to command the fort at Kashipur, he neglected his duties and permitted a low Musalman adventurer to administer the district in his own name and plunder the people as he liked. In consequence of this Shib Deo exchanged offices with Hari Ram, but the latter never forgot the slight put upon him by his cousin and now took up arms against him. It is said that the cousins fought seven great battles, in only two of which Shib Deo claimed the victory. The seventh battle took place near the confluence of the Gagas and the Dosandhgarh at Bans-ke-sira, and here Jai Kishan, son of Hari Ram, and 1,500 of his men lost their lives. Hari Ram at once surrendered himself to Shib Deo, and both agreed to refer the quarrel to the arbitration of Hafiz Rahmat Khan, who obliged Hari Ram to give Shib Deo a bond that he would ever afterwards faithfully obey him. Shib Deo now again became the real ruler of Kumaun, but he had many enemies, and his life was constantly in danger. He was compelled to repress several plots with great severity, and thus he established his power. Raja Dip Chand granted him many villages, and besides his estates in the Tarai he had several valuable properties in the hills. After rearranging the establishment at Almora he set out for the plains, having heard that the soldiers from Nagarkot and elsewhere were clamouring for increased pay at the instigation of the Phartiyals of Kali Kumaun, who were always his chief enemies. Shib Deo advanced rapidly to Kashipur, and here summoned his supporters, but before any one arrived the

soldiers mutinied and murdered Shib Deo and two of his sons. This occurred in the cold weather of 1764, and was followed soon afterwards by the death of Hari Ram. From this date the dependence of the plains on the hill State may be said to have ceased, and in the highlands, too, there were so many internal commotions that merely the semblance of government remained. Jai Kishan succeeded his father in the Tarai and held the reins of government for some two and a half years, when a son was born to Dip Chand. The mother of this boy, who had great influence, desired a share in the government and intrigued with Hafiz Rahmat Khan to eject Jai Kishan. The Rohilla wrote to the latter and advised him to submit; whereupon Jai Kishan threw up his office. He was succeeded in the government of Kashipur by Jodha Singh, the favourite servant of Hafiz Rahmat Khan; Parmanand Bisht was appointed viceroy of the Tarai, and Mohan Singh, a Raotela of obscure descent, became head of the army. A year later the intrigues of Parmanand deprived Mohan Singh of his appointment and he fled to Rohilkhand, his place being taken for a time by Parmanand and then by Jai Kishan and Harak Deo. In the meantime Mohan Singh, through the assistance of Dunde Khan of Bisauli, who was jealous of the influence of Hafiz Rahmat Khan, assembled a force of Rohillas and hillmen, and captured Almora with the Raja and Rani, eight months after the expulsion of Mohan Singh. The latter then put Parmanand and the Rani to death.

Hearing of this state of affairs Hafiz Rahmat Khan sent for the sons of Shib Deo and advised them to make some attempt to recover the power once exercised by the family. The Joshis collected a large force in the plains, invaded Kumaun and expelled Mohan Singh, who sought safety first with Zabita Khan of Najibabad and then with the Nawab of Oudh. Dip Chand was so pleased with the change that he desired to confer the two principal positions in the administration on the Joshi brothers with Kishan Singh as viceroy, but Jai Kishan refused to serve with Kishan Singh, and thus it became necessary to place the two offices of prime minister and head of the army in the charge of one person. Harak Deo Joshi accepted the position

and appointed as his deputies a Bisht of Chupawa and Lakshmi-pati Joshi. Diwan Siromani Das, the Brahman of Bazpur, was confirmed in his appointment of governor of Kashipur, with a grant of eight villages as well as the confiscated estate of Mohan Singh. Manorath Joshi, son of Hari Ram, was made governor of Rudarpur, and once more a semblance of order began to make itself manifest in the administration of public affairs in the plains. Shortly afterwards Siromani died and was succeeded by his son, Nand Ram, who, with his brother, Har Gobind, was resolved to carve out an estate for themselves. They called for more recruits from Nagarkot and also enlisted a large number of the roving mercenary bands which the disorder in the plains had created.

At this time Mohan Singh wrote to both Jai Kishan and Harak Deo, begging them to allow him to return to Kumaun. Harak Deo politely declined, but Jai Kishan was imprudent enough to invite him back to Kumaun. On his way to the hills, Mohan Singh visited Nand Ram at Kashipur and promised to confirm him in the government of the plains. He then proceeded to Almora and almost at once assumed control of the administration, although both Jai Kishan and Harak Deo remained in office. The former proposed that the Tarai should again be brought under the rule of Kumaun and that an effort should be made to expel Nand Ram. Mohan Singh outwardly agreed to the suggestion, but wrote secretly to Nand Ram, promising aid if necessary, so that when Jai Kishan reached the plains he found a strong force ready to oppose him at Haldua between Kashipur and Chilkia. In the fight that took place Jai Kishan was defeated and the brother of Dip Chand killed. Mohan Singh thus gained many advantages, as the Joshis were now separated; Harak Deo fled for refuge to Pali, and the Raja and his sons were put in prison at Sirakot; Mohan Singh then proceeded to Kumkhet, a village in pargana Kotah, and under pretence of making a common attack on Nand Ram and the rebels in the plains invited Jai Kishan to attend him. The Joshi at first refused, but after the violent entreaties of Mohan Singh came to Kumkhet where he was treacherously murdered. Mohan Singh then went to Almora, shut up Harak Deo in

prison and followed this up by murdering Dip Chand and his two sons in 1777.

Mohan Singh now proclaimed himself Raja under the title of Mohan Chand, and assumed at his installation all the insignia of a rightful ruler. He appointed his brother, Lal Singh, and Madhosudan Pande of Patiya to the chief offices of the State; he wrote to Nand Ram that he would abide by the former agreement, himself retaining the hills and leaving the lowlands of Kashipur to Nand Ram with Gularghati as the boundary. But Nand Ram sought for some better authority, and proceeding to Lucknow offered the whole of the low country to the Nawab, agreeing to hold from him as lessee and to pay a considerable sum as revenue. The Nawab readily accepted the gift, and directed his officers on the frontier to assist Nand Ram in all his undertakings, appointing him *amil* for all the low country. With this support behind him, Nand Ram resolved to extend his possessions, and instigated Mohan Chand to demand submission from Manorath Joshi, who still held Rudarpur. The Joshi indignantly refused, and prepared to attack both Mohan Chand and Nand Ram, but was persuaded by the latter that he was in fact a secret enemy of the Raja, and that if they joined their interests they could easily overpower him; suggesting that as all the Chands were dead, the Joshis might obtain Kumaun. On the strength of this Manorath proceeded to Bazpur with a slight escort, where he was treacherously murdered with all his men, and Nand Ram took possession of Rudarpur in the name of the Nawab. Thus passed away for ever even the nominal authority of the Kumaun Rajas over the parganas of the Tarai. Nanakmata and Bilheri were at this time supposed to be mortgaged to the Pathans of Barcilly and with Sarbna also fell into the hands of the Oudh Nawabs, who retained nominal possession of the Tarai until the British occupation in 1802, when Shib Lal, son of Hargobind and nephew of Nand Ram, was found in possession as farmer. Kilpuri alone remained for a time in the hands of the Kumaun landholders, but this also had to be yielded up to the Nawab's agents. The Bhabar, however, remained in the hands of the former owners

No matter of general interest belongs to the local history of the Tarai during the period between the accession of Nand Ram to the management and the British occupation. Mr. Batten's account of the administration of the Tarai during this time partially explains the causes of its diminished prosperity in modern times, of which some account has been given in the preceding chapters. Mr. Batten considers that on the whole the rule of the Oudh Nawab in the Tarai was beneficial, but chiefly from a negative point of view. He goes on to say: "The bad government of districts naturally more adapted for culture and habitation drove large colonies of people from the south to a region where the background of the forest and the hills could always afford a shelter against open oppression; where the nature of the climate was not such as to invite thereto the oppressors into whose hands a fertile and salubrious land had fallen, and where also on this very account the rulers who did exist found it their interest to conciliate and attract all new-comers. The management of the territory in question by Nand Ram and Shri Lal is generally well spoken of, except in the matter of police; but even in this latter respect the mismanagement was not more injurious to society than the state of affairs in regard to the forest banditti became in times not far distant from our own. I believe that it may be confidently stated that at the commencement of the British rule in Rohilkhand, there existed in the Tarai a greater number of inhabited spots than there existed 30 years afterwards in the same tract; that more and more careful cultivation was visible in every direction; that the prairie, if not the forest, had retreated to a greater distance; that the *guls* or canals for irrigation were more frequent and better made; that more attention was paid to the construction and management of the embankments on the several streams; and that, finally, on account of all these circumstances, the naturally bad climate, now again deteriorated, had somewhat improved. While recording this statement, I must not omit to add that I myself possess no positive separate proofs that my assertions are correct; but that I write under the influence of almost universal oral testimony supported nevertheless by this circumstance, viz. that the revenue statistics of the tract under discussion show a descending

scale in regard to the income of the State—a product which, under general rules, bears an approximately regular proportion to the prosperity of a country.”

“Such is my general position; but local circumstances also added to the deterioration, and amongst these an allusion on my part is all that is necessary or proper, to the hasty and perfunctory mode of settlement adopted in the earlier years of the British rule; to the disputes, in and out of court, concerning zamindari rights, between Shib Lal and Lal Singh; and, again, between the latter and his nephew, Mahendra Singh's family; to the continued bad police management; and perhaps more than all to the neglect and indifference of the English revenue officers, who were scared away from the tract by the bad reputation of its climate, and only occasionally attracted thither by its facilities for sport. In fact, the sum of the whole matter is in my opinion this: that even long neglect in other quarters can by a change of system be speedily remedied; but that, in the peculiar reign of which we are treating, a very brief period of neglect or bad management is sufficient to ruin the country.”

an Mohan Chand signalized his accession by the persecution of all the friends and relations of Shib Deo, and obliged them to fly from Kumaun to the plains. A reign of terror ensued, and the Garhwal Raja, Lalat Sah, invaded Pali. Mohan Chand then summoned Harak Deo, and promised him the restoration of his offices and lands if he would fight the ancient enemy of the country. Harak Deo temporized, and in the meantime the Kumaunis were routed at Bagwali Pokhar in 1779. Mohan Chand thereupon fled to join Faiz-ullah Khan of Rampur, and Lalat Sah, after consulting with Harak Deo, placed his own son, Parduman, on the throne of the Chands. Parduman Chand appointed the Joshis his principal advisers, and became a veritable Kumauni, for he refused submission to his elder brother, Jaikarat Sah of Garhwal. Meantime Mohan Singh, having failed to enlist the sympathies of the Rampur Nawab on account of the adverse influence of Harak Deo, assembled a force of Nagas or religious mendicants from Allahabad, and invaded K by the Kosi under the pretence of going on

pilgrimage to Badrinath, and actually got as far as the confluence of the Sual and Kosi in the north of the Naini Tal district. Here they were utterly defeated with the loss of half their force by Harak Deo. Parduman Chand now sought to unite Kumaun with Garhwal, but was so long absent from Almora that Harak Deo, in spite of his efforts, could do nothing against a combination of Nand Ram, Mohan Singh, Lal Singh and Parakram Sah, the brother of Parduman, who claimed Garhwal as his own. Harak Deo was defeated in 1786 at Naithana in Talla Dora of Pali, and with his flight to the plains the Garhwali domination ended.

Mohan Chand again became supreme in Kumaun and made an alliance with Parakram Sah, ignoring Parduman altogether. Harak Deo then on his own account collected a force at Barhapura and invaded Kumaun. Near Almora he defeated and captured Mohan Singh and Lal Singh, his brother, and slew Bishan Singh, his son. He released Lal Singh, but put Mohan Singh to death in 1788. He then invited Parduman to return, but he refused, and Kumaun was for a time without a master.

Harak Deo thereupon sent for Shib Singh, a Rastela descendant of Udyot Chand, and installed him as Raja, knowing that he needed a Chand to support his own rule. The Joshis of course remained supreme, and this period up to the Gurkhali conquest is known as "the Joshiyal." Soon afterwards Lal Singh with the aid of Faiz-ullah Khan of Rampur invaded the hills. A battle was fought near Bhim Tal in which Gajadhar, the Joshi leader, was slain and his forces routed. Lal Singh reached Almora and pursued the retreating Joshis into Garhwál, whither Harak Deo and Shib Chand had fled. In Garhwál they were received by Parduman, but Parakram sided with their enemies and assisted in the installation of Mahendra Singh, the son of Mohan Chand, as Raja of Kumaun in 1788. Lal Singh took the place of Harak Deo, and persecuted the Joshis without mercy. Harak Deo fled to Bareilly, but his intrigues there were frustrated by Lal Singh's presenting himself in 1789 before the Oudh Nawab, who was hunting in the jungles at Khera near Haldwani. He claimed the protection of Oudh for Mahendra Singh on the ground of alliance

and the constant acknowledgment of the right of Oudh to the Tarai.

The Nepalese were well acquainted with the state of affairs in Kumaun, and the next historical event is the invasion by Ran Bahadur in 1790, the way having been prepared by intrigues with Harak Deo. The story of the Gurkha success belongs to the account of the Almora district. After the defeat of Lal Singh in Kali Kumaun, Mahendra Singh, who was on his way to assist his uncle, fled to Kotah, where he was soon afterwards joined by Lal Singh, who had retreated to Rudarpur. In the following year we find Harak Deo at Almora engaged with the Gurkhas in preparation for the invasion of Garhwal, while in the meantime the Chands were still in possession of the Bhabar. Mahendra Singh attempted to pass by Bhim Tal to Almora, but was attacked by the garrison of Barakheri and obliged to retire to Kilpuri in the Tarai, which he now made his headquarters. A second expedition from Kilpuri towards Kali Kumaun was equally unsuccessful, for he found himself opposed not only by the Gurkhas, but by the great mass of the Maras, who had espoused the part of Harak Deo. In 1794 Ghulam Muhammad Khan murdered his brother, Muhammad Ali Khan of Rampur, but was defeated by the British at Bhitaura in Bareilly and subsequently captured. After the return of the British and Oudh troops from Rampur, Mahendra Singh began to levy the disbanded followers of Ghulam Muhammad Khan for an attempt on Kumaun, but the Gurkhas under Amar Singh Thapa marched on Kilpuri and thus deprived the Kumaunis of their only rallying point. Mahendra Singh and his party had now lost the whole of their possessions and fled to the Oudh Subahdar, requesting his aid in recovering that part of the Tarai which properly belonged to the Nawab. Atabeg Khan and Raja Shambunath were instructed to take measures to protect the interests of Oudh, and these apparently would have led to war with Nepal had not Mr. Cherry, the Resident, arranged an agreement by which the Gurkhas promised to yield up all pretensions to the Tarai, while the Nawab agreed to respect their position as rulers of Kumaun. At the same time provision was made for the retention by the exiled

family on some doubtful tenure of a portion of the Tarai for their subsistence; this, so far as any jagir was concerned, was subsequently exchanged by the British for the grant of Chachait in the Bareilly district.

The hill portion of the Naini Tal district as well as the Bhabar was now included in the Gurkha subah of Kumaun. From 1791 to 1792 the officer in charge was Joga Malla, who was succeeded in 1793 by Qazi Nar Sahi with Ramadatta Sahi in charge of the civil administration and Kalu Pande as commander of the forces. Nar Sahi ruled with great vigour and cruelty and was subsequently recalled, his place being taken by Ajab Singh Khawas Thapa with Sreshta Thapa as deputy and Jaswant Bahadur in command of the troops. After the deposition of Bahadur in 1795, Amar Singh Thapa was placed in charge of Kumaun and was followed in 1797 by Bam Sah, who ruled for a short time, and was then replaced by Ajab Singh again, and after a few months by Dhaukal Singh. In 1802 the latter was succeeded by Rudabir Sah, and in the following year by Gajkesar Pande. We have in fact nothing else but this list of names and occasional references to settlements of the land revenue during the period of Gurkha rule in this district. All the time Harak Deo was endeavouring to enlist the sympathy of the British and the Oudh Nawab on behalf of the Garhwalis, but failed to achieve any success, and after a futile attempt to invade Kumaun from Garhwál through Johar retired in disgust to Kankhal near Hardwar. All we know of the Gurkha rule and their oppression belongs to the histories of Almora and Garhwál. The latter was governed as if its rulers' object was to turn it again into a jungle; but Kumaun appears to have been more favoured. The property of individuals was respected, the grants of land made by previous rulers were confirmed, the revenue was collected in the usual manner, and a rude attempt was made to administer justice. A large number of Kumaunis were taken into the service of the Gurkhas, but chiefly from the upper parganas of Kumaun. The army was distributed throughout the province, and each district was obliged to provide pay to a certain number of men.

This state of things lasted till November 1814, when war was declared between the British and Nepal. At this time Bam Sah was again Governor of Kumaun, assisted by his brother, Hasti Dal. In November, 1801, Rohilkhand was ceded to the British by the Nawab Wazir of Oudh, and with it all the Tarai parganas and Kashipur. These were originally attached to the Bareilly district, but shortly afterwards Kashipur was assigned to Moradabad. In October 1814 Lord Hastings having received information which led him to suppose that Bam Sah, being disgusted with the proceedings of the Thapa party which at this time exercised the chief authority in Nepal, would not be disinclined to assist the views of the British Government and deliver up Kumaun into their hands, sent the Hon'ble E. Gardner, the second assistant of the Dehli Resident, to Moradabad in order to open correspondence with Bam Sah. The latter and his brother had turned all their attention towards commercial operations and now held the monopoly of the trade passing through Chilkia and Baramdeo, which brought them in a considerable revenue. At the same time the Company's factory at Kashipur, under the superintendence of Dr. Rutherford as trading agent, kept up a continual connection with the hills, where a large quantity of hemp was raised and prepared on a system of advances for the Company's investment. The British Government had resolved to annex Kumaun, and so Mr. Gardner was limited to offer Bam Sah a jagir either in Kumaun itself or in some other quarters. With regard to Lal Singh it was decided that any attempt to restore him to the possessions temporarily held by the family would be obnoxious to the people in general, and the circumstances under which his brother obtained the chief authority in Kumaun deprived him of that consideration which the Government was disposed to show to the surviving representative of the families formerly reigning in the hill principalities. Moreover, had the British desired to restore a member of the ancient house, there existed at this time in Parewa of Kotah some lineal descendants of Lakshmi Chand, son of Rudra, and many other members of other branches of the family, any of whom would have been preferable to Lal Singh.

Mr Gardner's efforts to open unication with Bam Sah

from Moradabad proved unsuccessful, and on the 1st of January 1815 he moved his headquarters to Kashipur, but here he met with no more success.

It had already been decided in December, 1814, that an attempt should be made to seize Kumaun from the Nepalese. In this account we have nothing to do with the other operations of the Nepal war, but will confine our attention to the expedition which was sent through the Naini Tal district. Colonel Gardner and Captain Hearsey, who had formerly served in the Mahratta army, were appointed to raise a force of Rohillas for the attack on Kumaun, and both these officers were under the general control of Mr. E. Gardner, who was appointed Agent to the Governor-General. During January, 1815, preparations were actively carried on Rohilkhand for the invasion of Kumaun. The British headquarters were at Kashipur, and hither came Harak Deo Joshi, who was now close on 70 years of age, and began immediately to enter into communication with his friends in Kumaun to prepare them for the approach of the British force. The Gurkhas immediately made counter-preparations, strengthening their garrisons and building forts. They enlisted numbers of the Rampur Pathans, and Shah Wali, who was formerly farmer of Rudarpur, but had been expelled by the British for defalcations, was made warden of the posts lying along the foot of the hills. These proceedings were met by a proclamation forbidding the subjects of the Company and its allies from entering the Nepalese service, and directing those who had already engaged to abandon it before the end of November. Later, a second proclamation declaring war against the Gurkhas was distributed among the hill people, and resulted in the return of the Pathan levies to the plains.

At the end of January everything was ready for the attack on Kumaun. The main body of the forces consisted of about 3,000 men, with two guns, under Colonel Gardner, and was directed to proceed up the valley of the Kosi by Chilkia and thence towards Almora; while at the same time Captain Hearsey with some 1,500 men was to move from Pilibhit up the Sarda. At the same time Prithidat Sah, the Raja of Doti, who had been expelled by the Gurkhas, had raised 500 men to attack Doti,

but this force was subsequently recalled from Bilheri, where they had been assembled, and united to that under Captain Hearsey.

On the 9th February, 1815, five hundred men were sent to Rudarpur, where they were ordered to halt until they received intelligence that the main body was about to enter the hills; they were then to march to Bhamauri to attack the fort of Barakheri towards Bhim Tal and to endeavour to rejoin by Ramgarh and Peora the main body under Colonel Gardner after it had established itself in the hills. Some delay occurred owing to bad weather; but on the 11th of February Colonel Gardner marched from Kashipur with his whole force. A large number of men had been collected to carry the baggage of the troops, and part of the heavy stores were taken on elephants which were found very useful in spite of the difficulty of the country. The force reached Kaniyasi on the 12th of February, Chilkia on the 13th and Amsot on the 14th, from which place a small outpost of Gurkhas retreated on the advance of the column. An advanced guard reached Dhikuli on the Kosi at the entrance of the hills on the evening of the 15th. Here the Gurkhas had a stockaded fort which they abandoned without resistance, and on the 16th the British marched up the Kosi to Chukam, where a halt was called for two days to bring up the stores, while a detachment was left at Dhikuli to keep open the communications with the plains. The Gurkhas had a post on the right bank of the Dabka, fifteen miles to the south-east of Chukam, and on the 18th of February 300 men were detached to dislodge the enemy from this position, but the Gurkhas evacuated the place and retired into the hills. On the same day a party of 300 men were also sent to occupy Tanguraghat, about a mile above Chukam in the valley of the Kosi.

On the ridge which separates the Ramganga and the Kosi, three or four miles north of Chukam at Kath-ki-Nau, the Gurkhas had a post from which it was necessary to dislodge them, as it threatened the line of communication. On the 19th five hundred men were detached against Kath-ki-Nau from which the enemy retreated to the Gagar fort. On the same day the main body hed up the Kos to Ukhaldunga in patti

Kotah Talla, a distance of about seven miles. Late in the evening a party was pushed forward from our position on the right to occupy a hill communicating with the Tangura and Lohgaliya ghats, and the enemy perceiving the movement advanced in the same direction, our party gaining one height as they did the other; a musketry skirmish ensued and continued till dark, when our men advanced and drove the enemy from their positions. The passage of the ghats was now secured and information also came in that the two forts at Kotah had been abandoned by the enemy. On the 21st the advanced guard consisting of 700 men was pushed forward to Sethi, five or six miles higher up the valley, where Lieutenant-Colonel Gardner took all necessary precautions against a night attack. On the way intelligence was received that a Gurkha force, estimated to be about 800 strong, had marched from Almora under Angat Sirdár and had taken up a position at Bujan, about fifteen miles higher up the valley on the main road to Almora, where it had been joined by the garrisons of Kotah and Kath-ki-Nau. As it was evidently not advisable to risk an attack on the Gurkha force with the raw levies under his command, Lieutenant-Colonel Gardner determined to leave the valley of the Kosi and the direct road to Almora, and striking off to the left to endeavour to turn the enemy's position. The Kosi in the first twenty miles of its course flows in a direction nearly north and south. Some miles below Almora it turns somewhat abruptly to the west and runs on in that direction to Chukam in its course towards the plains. Bujan, between Kakrighat and Khairna, where the Gurkhas had taken up their position, is situated near the apex of the triangle thus formed, and to cut off this bend in the river a path strikes across the hills from the upper part of the valley of the Kosi, again entering the same valley near Pant Pípal and Amel in Kosyan, about fifteen miles above Chukam. Lieutenant-Colonel Gardner determined to follow this route. The distance to Almora was not much greater than by the road along the Kosi, and, although the natural difficulties were perhaps greater, there were many advantages afforded by this route even if the Gurkhas had not been posted at Bujan. By thus striking off he could open communications with the western

part of the province which was known to be greatly disaffected to the Nepalese cause. This was the richest part of Kumaun and he could hope to draw from it plentiful supplies of provisions for his troops, while he would be enabled at the same time to cut off those of the enemy and to intercept communications with their armies west of the Ganges. Another important advantage which this route held out was that by it the British could approach Almora itself on its most open and least defensible side.

On the 22nd February the force advanced a few miles up the Kosi to Amel, and thence on the same day Lieutenant-Colonel Gardner, turning to the left, pushed forward with 300 men, past Binakot, to seize the commanding post of Chaumukhia or Chaumua Devi situated on the range which separates the Kosi from the Rám-ganga at an elevation of 6,354 feet above the sea. Owing to the steepness of the mountain and the fatigue caused by an ascent of not less than 4,000 feet, only forty or fifty men reached Chaumua Devi by sunset. During the night a few more came in, and next morning the rest of the party arrived. The ground was covered with snow, which prevented the difficulty that would otherwise have arisen from the want of water. The Gurkhas under Angat Sirdár, perceiving that our force had changed the line of its attack and had left the valley of the Kosi, divined our object and immediately marched towards Chaumua to endeavour to gain that point before our arrival. But they were too late, and when they were about four miles distant, finding that the post was already occupied by the British and thinking themselves too weak to attempt an attack, they fell back. The possession of this post was of great importance to our operations, as it opened the road towards Almora and gave us the means of communicating with the western district of Kumaun and Garhwal. The rest of the force reached Chaumua on the 25th February, and on the following day the guns and the elephants with the heavy baggage were got up the hill with much labour and difficulty. The delay in the arrival of the depôt of supplies made it, however,
 ble to move onwards at once. From intercepted letters
 tly appeared that it was the intention of the enemy

to defend both these points to the uttermost, but the onward march to Tangura drove their advanced guard back, and it was not supposed that the British would attempt the more rugged road by Binakot. The expectation that by taking this road plentiful supplies would come in was fulfilled; the people everywhere were most friendly, bringing in grain and fodder, giving information of the movements of the enemy and rendering aid in every way possible.

The range called Kathál-lekh, on which the British were now encamped, runs in an easterly direction towards Almora. The path follows the ridge and there are no great difficulties in the way. The Gurkhas determined to make another attempt to stop our progress and to interpose their forces between us and Almora. They therefore ascended the mountain and marching to Kumpur (Ránikhet), a small temple 5,983 feet above the sea, a few miles in front of our encampment at Chaumua, stockaded themselves in a very strong position which commanded the road to Almora. Police levies, each consisting of fifty men under a Darogha, were placed at Kotah and Kath-ki-Nau to relieve the troops who could ill be spared from active service at this time, and it was also found necessary to leave a guard of 200 men at Chaumua for a dépôt for the provisions which had not yet arrived. On the 28th February the British force made a short march to a hill called Kapina-ke-Dánda near Kumpur and encamped opposite to the enemy's stockade. The Nepalese force was estimated to be about one thousand strong with one gun, and their position was so well chosen that it was considered undesirable to attempt to carry it by assault, while at the same time Lieutenant-Colonel Gardner was unprovided with the means of regularly attacking and breaching the stockade. It was therefore determined, as there was no immediate probability of the Gurkhas receiving any considerable reinforcements, to suspend active operations until our force could be joined by a body of Rohillas which had been raised at Hapur in the Meerut district and which was soon expected to enter the hills in support of Colonel Gardner's force.

Here we may leave the main body for the subsequent history of the expedition and the capture of the

capital belong to the history of Almora. Meanwhile Captain Hearsey had left Pilibhit and reached Bilheri on the 13th of February. Here he halted and distributed the proclamation and invitations that he had received from Harak Deo, with the result that in a few days over a hundred Kumaunis entered the British service and informed Captain Hearsey that the garrisons of the Timla forts were inclined to quit those places. On the 17th he crossed into the Tanakpur Bhabar and left this district. The history of his early success and ultimate disaster also belongs to the account of the Almora district. Captain Hearsey had left 500 men at Bilheri to watch Hastidal who threatened to cross the Sarda, but the latter accomplished this undertaking higher up near Champawat. The detachment left at Rudarpur did little and failed to reach Colonel Gardner as directed; their only achievements were the occupation of the Barakheri fort and of Chhakhata Garhi near Bhim Tal after they had been abandoned by the enemy.

In the meantime Lord Hastings had sent on reinforcements to Kumaun, in addition to the 850 men from Hapur who joined Colonel Gardner at Kumpur on the 22nd of March and enabled him to occupy Siahi Devi opposite Almora. Colonel Nicolls with 2,025 men and twelve guns entered the hills early in April and joined Gardner at Katarmal on the 5th, without any difficulty. On the 26th of April 1815 Almora surrendered and the Gurkhas under Bam Sah withdrew to the Kali. The treaty of peace by which Kumaun was ceded to the British was not concluded, however, till the 2nd of December, and ratified on the 4th of March 1816. The Hon'ble E. Gardner was made Commissioner of Kumaun on the 3rd of May 1815, and on the 8th of July Mr. G. W. Traill was appointed his assistant. Shortly afterwards the latter succeeded Mr. Gardner as Commissioner.

The history of the district now resolves itself into a series of personal narratives, for up to 1835 the history of Kumaun is inseparably bound up with the biography of Mr. Traill, just as the period from 1840 to 1850 is identified with Mr. Batten, and from 1850 to 1884 with Sir Henry Ramsay. Traill's régime was wholly paternal, despotic and personal, but at the same

time, though arbitrary, it was a wise, just, and progressive administration. His doings have been narrated in the account of the fiscal history of the several subdivisions and in the development of the various branches of the administration as referred to in the previous chapter. Mr. Traill was practically supreme in Kumaun, for little was known of the province by the central authorities, and the local officials were given a free hand. As characteristic of the man, his application for a copy of the regulations in force in the plains may be quoted, in which he stated that as he found it necessary to draw up some code for the guidance of his subordinates and had not for six years received the regulations in force in the southern districts, he should be glad of a copy to see whether there was anything in them which would suit the peculiar circumstances of his charge. In 1822 Mr. Glyn was deputed to Kumaun to report on the police and criminal administration. Reference has already been made to his remarks, the result of which was that the Government of India bore testimony to the success of Mr. Traill's administration and the entire fulfilment of the sanguine anticipations of his peculiar fitness for the important duties he then fulfilled;* and in 1825, in consideration of the judgment and zeal with which he discharged the duties of Commissioner, he was authorized to draw the full pay of a Judge and Magistrate.†

In 1824 it was proposed that the Tarai should be transferred to Moradabad, and after a very lengthened correspondence the boundaries were fixed between the plains and the hills by Messrs. Halhed and Traill. There is nothing more characteristic of the imperious and almost despotic nature of Traill than the letters he wrote and the arguments he used in this controversy, and the result was that he gained his own way on almost every question. He appears to have looked more to facts than theories and to have included in the hill portion of the Bhabar at least those portions of the lower forest and prairie which were thought to be more in the real or nominal possession of the hill-men than in that of settlers from the plains, or in which the Bhuksas and Tharus preferred the hill jurisdiction or were

* Government, dated 19th December, 1822.

† Government, dated 17th August, 1825

In 1831 Colonel Gowan was appointed Commissioner of Kumaun, and his assumption of office was at once marked by a closer supervision of the administration of the province by the central authority. Traill left the province orderly, prosperous and comparatively civilized, but his machinery was not easily worked by another hand. There was no law, and the lawgiver had been withdrawn. The Board of Commissioners and the Government, which had remained quiescent while the province was in the hands of an administrator of tried ability and equal to all emergencies, found it necessary to assert their control and lay down specific rules in matters that had hitherto been left to the judgment of the Commissioner. Colonel Gowan held office till 1838, and during his administration in the year 1837 the Kashipur pargana was restored to Moradabad and the Tarai to the Rohilkhand Division. In the same year Mr. R. M. Bird visited Kumaun and recorded a minute on the tration

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The result was a condemnation of the existing state of affairs as regards the civil and criminal courts, and in consequence Act X of 1838 was passed and the Assam rules adopted. In 1839 the Board issued a multitude of instructions respecting revenue affairs, the result of which was a closer connection of Kumaun with the central authority and the decreased personal responsibility of the Commissioner.

In 1839 Mr. G. T. Lushington became Commissioner and held office till 1848, when he died. He was followed by Mr. J. H. Batten, who had been Assistant Commissioner of Garhwāl and latterly had completed the settlement of Kumaun. Mr. Batten had long been recognised as the most prominent officer of the Kumaun Commission, and till his appointment to the highest post he had been consulted in every step. During his rule, which lasted till 1856, the predominancy of official supervision gradually subsided. The history of his time is uneventful. The Bhabar was reannexed to Kumaun in 1842 and the Tarai was made a separate district under its own Superintendent.

In 1856 Mr. Batten was succeeded by Captain (afterwards Major-General Sir Henry) Ramsay, who ruled Kumaun for nearly 30 years, holding this office till 1884. He had already held charge of the Bhabar for some years, and consequently in the light of the experience he had thus gained he was enabled to turn his attention to the improvement of that tract as well as to Naini Tal itself, and the prosperity of the settlement is in no small measure due to his influence. The district remained unchanged, save that in 1870 the Kashipur pargana was restored to the Tarai. On his departure from office it soon became evident that Kumaun was too large a charge for a single man, and this was one of the chief reasons which led to the creation of the Naini Tal district and the absorption of the Tarai in 1891. Apart from administrative changes and the revenue settlements, nothing has occurred worthy of note in the history of the district with the exception of the mutiny, which only affected it in a small degree.

The narrative of the mutiny in the Naini Tal district is taken from the account of Sir Henry Ramsay who was then

Commissioner. On the 22nd of May 1857 he received tidings of the outbreak at Meerut. He hastened back from the snows of Garhwál to Almora and thence to Naini Tal, where he made preparations to obtain funds, procure supplies and preserve order at the foot of the hills. The treasuries in Bareilly had been plundered by the rebels, while the Banjaras had collected in great numbers and closed the roads in Rudarpur. On the 1st of June the refugees from Bareilly reached Haldwani, and three days later the Moradabad party arrived at Kaladhungi. On the 6th of June all communication was cut off from the plains, but early in July a dák line was established across the hills to Mussoorie.

“Soon after the 10th of June the most complete disorder prevailed in the plains, and large hordes of dacoits from Rampur and the Moradabad district filled the Bhabar villages of lower Kotah; they stole the cattle, removed thousands of maunds of grain, and did as much damage as possible. Our strength at that time was not sufficient to protect the whole of the Bhabar, I therefore confined my efforts to the Chhakhata district in the vicinity of Haldwani. The hill cultivators of the Bhabar returned to the hills after a few attempts at resistance in which about twenty rebels were killed. I could not offer any efficient resistance, and the rebels having in a few days plundered the villages the country was left a desert.”

“On the 27th June the rebels again collected below upper Kotah. I sent a party under Dhan Singh to defend the place, but Mastu Khan of the Rampur territory came with an overwhelming force of horse and foot. Dhan Singh and some others were killed, the tahsíl was plundered of the few rupees (about 400) in deposit, and the rebels at once retired without destroying the villages. About the middle of June the evil-disposed of the hill people, especially on the borders of the plains, began to show that they were sensible of our weakness, and as I had no district police, I felt the necessity of resorting to extreme measures to preserve order; for I foresaw that if any party of the province became disorganized, our position at Naini Tal would be most critical, and if one pargana got into disorder, the probability was that others would soon have followed the

example. As soon as I saw the danger alluded to above, I proclaimed martial law in Kumaun. In the first few cases of dacoity, I sentenced to long terms of imprisonment; this was not sufficient, and I gave longer sentences, but without success, and last I sentenced some dacoits to capital punishment. This was made known throughout the province; the bad characters were frightened, the good men felt safe, and the country remained as peaceable as in former years. It soon became evident after the arrival of the Rohilkhand refugees, that there was no prospect of immediate relief. Our funds were alarmingly small, and we had then no prospect of assistance. Mr. Colvin and I drew up a scale of allowances by which we paid every European monthly. Advances were made on receipt and nearly all have been adjusted."

The Rampur Nawab was striving to maintain order in his own territory and also to assist the Commissioner of Kumaun; but the latter, hearing that a rising was likely to take place on the occasion of the Id in Rampur, and that the malcontents if successful would certainly attack the hills, sent all the ladies and children to Almora, whence they returned after the festival. On the 9th of September the police force belonging to the plains bolted, but the stations at and near Haldwani were maintained till the 17th, when a party of rebels, mustering about 1,000 horse and foot, took possession of the place. On the 18th Captain Maxwell, with a party of Gurkhas and about 40 cavalry composed of officers, defeated the rebels and killed about 150 of them. Up to the beginning of September the 66th Gurkhas and the eight irregular cavalry had protected Haldwani, but had been withdrawn on account of the dangerous state of the climate at that season. After this the police that remained retired to the entrance of the hills.

"On the 6th October the rebels, in number about 5,000, again took possession of the place; it was not deemed advisable to attack them, and an attempt was made to entrap the cavalry portion of the force. Although we failed in securing the cavalry, we created such an alarm that the rebels fearing an attack were seized with a panic during the night, cut their heel ropes and went off halter-skelter, leaving their gram and some other

property behind them. One sawar was caught next morning and hanged. The unhealthy season had passed away, and as we expected to hear of a force entering Rohilkhand, I urged on Colonel McCausland the necessity of taking up a position at Haldwani, to protect that part of the district, and be ready to assist in the destruction of the rebels, or at any rate to create a diversion. The arrival of the Nepal Contingent and the advanced state of the Kumaun levies enabled us to occupy Haldwani, and leave at Naini Tal a party strong enough to protect the passes on the Rampur side; while Lieutenant McIntyre's young regiment was available to take some of the Almora duties, and, if necessary, guard the eastern passes. On the 1st of January the rebels hearing of a supply of grain coming for our camp, made a night march from Rudarpur and appeared before Haldwani about 9 A.M. The force under Captain Baugh defeated them, killing about fifty. The impossibility of procuring more supplies of grain, and my store having become exhausted, most of Captain Crossman's cavalry had been ordered to Kashipur. In the end of January they returned, and Colonel McCausland came down with the headquarters of the 66th Gurkhas, and on the 1st of February we had about 1,000 infantry, 250 cavalry, two six-pounders, and two mountain train guns."

Fazl Haq's army of 4,500 men with four guns moved up from the east and encamped at Sanda, thirteen miles east of Haldwani, while Kala Khan, who had advanced with 4,000 men and four guns from Baheri, took up a position sixteen miles to the south of the town. They at first intended to attack the British in front and flank, and the ground was so much in our favour that the defending force remained quiet. When, however, they determined to unite their force for one frontal attack Colonel McCausland on the 10th of February attacked Kala Khan at Charpura and entirely defeated him, with the result that the rebels lost heart and never again settled down in the Tarai parganas. On one occasion a party came to collect revenue in Kilpuri and halted at the Sitarganj tahsil; but Captain Baugh was immediately sent out with 250 men and succeeded in surrounding and destroying the rebels. After this there was no further trouble in the district. Sir Henry Ramsay bears

testimony of the general loyalty of the hill people and states that, with a few individual exceptions, they behaved very well. There was never at any time any anxiety so far as the hill pattsis were concerned, and the only attempts at mutiny were those which occurred in the Tarai and Bhabar.

GAZETTEER

OF

NAINI TAL.

DIRECTORY.

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DIRECTORY.

[*Agar Patti.*]

AGAR *Patti*, *Pargana* RAMGARH.

THIS is the largest *patti* of the *pargana*, and lies to the west of Ramgarh Malla and Talla occupying the western and southern slopes of the high Mukhtesar range. It extends to the Dhari dák bungalow on the south, marching with Mahruri Talli. To the east lies Mahruri Bichhli which, with Kutauli Talli, also forms the northern boundary. It contains the lofty heights of Salbunga, between which and the Mukhtesar hills are the glens of Bana and Nathua Khan. The altitude is considerable and the *patti* is marked by the absence of warm fertile valleys, and even the lowest ravines are clothed with oak forest. Owing to the consequent coldness of the climate the crops are of an inferior class. The people are mostly Sauns or Agaris, a Sudra caste, whose hereditary occupation is mining. Agar contains a good deal of iron ore and several mines were opened by the Kumaun Iron Company, but have now long been closed. The people still derive their wealth mainly from roadmaking and building both in the hills and the Bhabar. Several of the leading Sauns have at one time or another made fortunes, and the people of Supi and Salbunga are very well off. Though they have of late suffered from outside competition, their houses give sure evidence of their prosperity. Potatoes are grown in large quantities, and the first extensive clearings for this crop were made in this *patti*, the result being the summary assessment of 1896, when Rs. 711 were added to the revenue demand on this account. The *patti* also has the advantage of ample means of communication. The road from Naini Tal to Almora passes along the northern border, and from it a branch takes off to Mukhtesar, whence a road goes to Dhar along the south of the *patti*. The people desert their homes *en* in the cold weather and either

betake themselves as labourers to the Bhabar, or find employment in executing Government contracts on the canals or elsewhere. In consequence of these contracts the people are in many instances heavily indebted, as they frequently undertake works without capital. The establishment of the Government Bacteriological Laboratory at Mukhtesar has already proved a source of constant income to the patti, and the Sauns have been largely employed in the building operations. The revenue in 1815 amounted to Rs. 1,309, but this was reduced to Rs. 1,148 in 1820, and again in 1843 to Rs. 1,122. In 1870 the assessment was Rs. 1,522, and it now stands at Rs. 2,698, including the potato fields, which are no longer administered separately from the rest of the patti. The incidence per *bisi* of 1st class *uparaun* land is now Re. 1-5-0. The population in 1901 amounted to 876 persons, but this figure is very deceptive as the census taken in October, 1900, when the people had not yet left their hill homes for the Bhabar, showed a total of 3,102, of whom 1,626 were males and 1,476 were females. All of these are Hindus, being mostly Sauns and Khasiyas. The largest villages are Chaukhata, Sunkiya and Dhanachuli, and there is a school at Supi.

BAZPUR, Pargana BAZPUR, Tahsil KICHHA.

The capital of the pargana is a small village, in latitude 29° 9' north and longitude 79° 7' east, on the left bank of the Ghunga and on the north side of the main Tarai road. It lies at a distance of twelve miles from Gadarpur, twelve miles from Kashipur, thirty-two miles from Moradabad and fifteen miles from Kaladhungi. Bazpur itself is a very insignificant place; more important is the market known as Mundia, a short distance east on the main road from Kaladhungi to Moradabad, while the actual headquarters of the pargana are at Shafakhana, about a mile north of Mundia, and so called from the dispensary there. Shafakhana contains an Estates bungalow and an excise shop, as well as the tahsil buildings, police-station and the post-office. The market day is Monday in each week. The total population of Bazpur and Shafakhana at the last census was 1,405 persons, of whom 922 were Musalmans. The place has greatly decreased in size since 1891 when the census returns gave 2,231 inhabitants.

BAZPUR Pargana, Tahsil KICHHA.

This is the western most subdivision of the Tarai, being bounded on the east by Gadarpur, on the north by the Kotah Bhabar, on the west by Chilkia and the Kashipur pargana, and on the south by the Suar tahsil of the Rampur State. The peshkar resides at Shafakhana, a village about a mile distant from Bazpur. Along the western boundary flows the Kosi river, while further east are the Ghuga, Naiya and the Dabka. The pargana lies at a distance of only five miles south of the hills of the Kotah Dūn, and has in consequence a very small gathering area to supply its springs, so that the water-supply is never very abundant. The pargana is well provided with roads. Along the southern border runs the main Tarai road from Melaghat and Kichha to Kashipur passing through Khela Khera, Bazpur and Sultānpur, at each of which places there are weekly markets. All the rivers on this road are unbridged, but a ferry-boat is maintained by the Estate over each of them. Parallel to this road there is a second in the north of the pargana, which leaves the Ramnagar-Kashipur road about four miles north of Kashipur, and passing through Shafakhana runs on through Dalpura to meet the Barakhera-Haldwani road in Gadarpur; this also is devoid of bridges. There are in addition two roads running north and south, one being the main road from Moradabad to Kaladhungi, which is now unmetalled, and the other running from the main Tarai road at a point two miles east of Sultānpur and joining the Kaladhungi-Ramnagar road about three miles east of the latter place; its course lies between the Kosi and the Ghuga, and consequently there are no unbridged rivers to cross. Altogether there are 119 villages in the pargana, all of which are held under direct management. The largest are Sultānpur, Bazpur, Khela Khera and Islamnagar.

Bazpur is the healthiest of all the Tarai parganas, and as it lies for the most part fairly high, there is scarcely any village without a considerable area of land capable of growing the millets, excepting those inhabited by Bhuksas, who confine their attention entirely to rice; all the villages have a large proportion of their land under maize and juar in the kharif, and the rabi throughout the pargana is generally good. None the less, the pargana had till recent years

declined very rapidly. In 1881 the population was 33,932 persons, while in 1901 it had fallen to 27,132, of whom 14,732 were males. Hindus and Musalmans are found in almost equal numbers, the former being chiefly Bhuksas, Panwars and Lodhs, and the latter Sheikhs and Banjaras. Similarly there was a great decline in the rent realized, the total dropping from Rs. 66,000 in 1891 to Rs. 48,600 in 1895. The decline was chiefly due to the neglect of irrigation and also to poor seasons. Of late years, however, there has been a considerable improvement, and the average collections between 1899 and 1902 rose to over Rs. 64,500. The total area of the pargana is 72,053 acres or 112 square miles, and of this 28,659 acres or nearly forty per cent. were assessed in 1902. The kharif is slightly the more important harvest, but the averages are approximately equal. Only one-third of the kharif crop and very little of the rabi are irrigated. Most of the irrigation is effected by means of earthen dams, which do a great deal of damage, but of late years these have been largely replaced by masonry structures. With the exception of the Khela Khara canal, there is no important irrigation system in the pargana, all the villages being watered from minor streams. The Bhuksas construct their own dams, while the rest are generally made by the Estate.

West of the Kosi there are a few villages, seven in number, which belong to this pargana; these were formerly on the east bank, but were transferred by the alteration of the channel after the floods in 1880. They are surrounded by heavy grass jungle and are liable to damage from the cattle in Kashipur; they are assessed at only four annas per *bigha*. East of the Kosi, the tract lying between this river and the Ghuga is characterized by heavy grass jungle in the north, while in the south it is comparatively open. The whole is well irrigated from the Jogipura and Pilakhar streams and lies high, growing a great deal of maize as well as rice, while the rabi is good. In Sultanpur, which is the best village of the whole Tarai, the rate rises to nine annas, but north of the Shafakhana-Kashipur road it falls to three annas six pies. East of the Ghuga is the central tract of the pargana consisting of Bhuksa villages in the north and villages cultivated by plainsmen in the south. The

northern part is very unhealthy and the cultivation inferior. Further south there are ample means of irrigation from masonry dams, and rents rise to seven annas a *bigha* or even more. The country beyond the Dabka is very similar and is cultivated by Bhuksas in the north and Musalmans in the south, the former paying as a rule four annas six pies, and the latter paying an average of nearly six annas.

BELPARAO, Patti Kotah Bhabar, Tahsil HALDWANI.

A market village on the submontane road between Ramnagar and Haldwani, situated in latitude $29^{\circ} 18'$ north and longitude $79^{\circ} 13'$ east, at a distance of seven miles from the former and twenty miles from the latter place. A path leads from Belparao north-east to Kotah village, a distance of nine miles, and a road goes south to Shafakhana in the Tarai. There is an Estates bungalow here and a school, which migrates from Pagaina in Almora. Close to the village are the headworks of the Belparao canal. The population of the village in 1901 numbered 720, of whom 697 were Hindus and 23 Musalmans. The land is chiefly held by Brahmans from the hill villages of Kotah. A market is held here weekly on Thursdays.

BHIM TAL, Patti and Pargana CHHA KHATA.

Bhim Tal is the name of one of the largest lakes in the district. It lies on the main road from Kathgodam and Ranibagh to Ramgarh and Almora, the road lying up the valley of the Barakheri stream, which carries off the surplus water of the lake into the Gola river. Another road leads from Bhim Tal to Bhowali on the Ranikhet cart-road and thence to Naini Tal a distance of about twelve miles. Other roads lead from Bhim Tal to Malwa Tal on the south-east, and to Dhari and Mornaula in Almora. The road to Ramgarh proceeds direct through Mahrageon to the Gagar Pass, from the summit of which one of the finest views in Kumaun is to be obtained.

The lake itself lies at an elevation of 4,500 feet above the level of the sea, in latitude $29^{\circ} 21'$ north and longitude $79^{\circ} 34'$ east. Its length, including the swamp to the north-west, is 5,580 feet, while its breadth is 1,490 feet at the widest and 625 feet

at the narrowest point, the area being in all 155 acres. The small depression at the upper end is known as Suriya Tal and acts as an efficient silt trap. The lake abounds in fish and the colour of the water is bluish-green and very clear. It has the advantage of not being polluted by the surface drainage from inhabited sites, and is therefore fit for drinking purposes. Close to the north-east side there is an island about one hundred yards from the shore, with which it is connected by a rock of shale when the lake is empty. It is about thirty feet high and sixty to seventy feet in diameter. The outlet consists of a natural gap in the eastern side close to the temple. The road runs along the eastern side of the lake past the temple and over an artificial embankment of masonry in the form of a semi-circle. This embankment was made to utilize the reservoir so formed for irrigation purposes in the Bhabar. The dam is 500 feet long, with the convex side upstream. It is 48·5 feet high in the centre, ten feet wide at the top, and 36 feet wide at the base, and is strengthened by curtain walls at the main outlet. The water is let off by iron sluices worked from above.

South of the embankment is an old temple erected by Baz Bahadur Chand, Raja of Kumaun, in the seventeenth century. There is an inscription here, but the date is missing. Beyond the embankment is the dāk bungalow, and a short distance further north is an inspection bungalow belonging to the Government Estates. Besides these there is a dharamsala or rest-house for native travellers, a school, and a post and telegraph office. At the southern end of the lake there is a small bazār. Coolies are supplied by a contractor, this arrangement having been introduced in 1901, when a special cess was first levied on the inhabitants of the neighbouring villages in lieu of the usual system of *utar* and *bardaish*, this step having been rendered necessary by the large number of travellers who pass through Bhim Tal.

A dam has recently been constructed at the upper end of the lake. The object of this is to preserve the fishing, which has suffered terribly at the hands of poachers. The worst form of poaching is that which occurs in the spawning season, when the fish go up the smaller streams and are trapped in hundreds by

the villagers. No fishing is permitted in the lake without a license, issued by the Deputy Commissioner. The general control of the lake, which is mainly used for supplementing the supply of the Bhabar canals which take out of the Gola river, is in the hands of the Executive Engineer of the Government Estates. At the north end of the lake a camp for the Boer prisoners of war was established in 1902.

BILHERI Pargana, Tahsil KICHHA.

This is the easternmost and the largest pargana of the Tarai. It is bounded on the east by the Sarda river, which separates the pargana and the district from Nepal; to the north lies the Bhabar Tallades of the Almora district, to the south Pilibhīt, and to the west the Chaubhainsi Bhabar and the pargana of Nanakmata, from which it is separated by the Kamin and Deoha rivers. The pargana consists of 91 villages, of which 86 are held in direct management, and the remaining five are *mustajiri*. The headquarters are at Khatima in the centre, Bilheri itself being an insignificant place of no importance. The population of the pargana at the last census numbered 24,360 persons, of whom 13,272 were males. The total shows a small increase over the figures of 1881, but is considerably less than that of the following census. Musalmans are comparatively scarce, numbering 1,530 persons; they are scattered over several villages and are only found in large numbers at Pachpera. Of the Hindus the majority are Tharus, while other numerous castes are Lodhs, Kisans and Chamars. The largest villages of the pargana are Khatima, Majhaura, Sunpahar and Naugaon. Markets are held twice a week at Khatima and Majhaura. The two chief roads of the pargana are the main Tarai road from Melaghat to Khatima and Sitarganj, and the road from Pilibhīt to Tanakpur which runs through Majhaura, Khatima and Bilheri. The latter passes over no unbridged rivers, till it reaches the Jagbura on the northern boundary. On the Tarai road the Deoha, which is joined by the Kamin just above the point where the road crosses it, and the Lohia are unbridged. The Deoha is a very large broad stream, and is quite impassable in heavy floods, and in such cases the post can only reach Khatima by way of Pilibhīt.

Besides these main roads, there is one running from Melaghat, where a large fair is held at the full moon of Kartik, to Neoria in the Pilibhit district, and from Majhaura there run two more roads, both of which pass through a very small portion of the pargana; one connects Majhaura with Neoria, and the other with Sitarganj, but the latter is not used during the rains.

Bilheri is perhaps the most unhealthy portion of the Tarai; and is consequently cultivated almost entirely by Tharus. The whole pargana, with the exception of the two large forest tracts of Banbasa and Surai, has been cleared of grass and jungle; and a very large proportion of the Tharu villages are situated in a broad open plain. In spite of the open nature of the country, however, and its high state of cultivation, and with a lower spring level and better natural drainage than any other part of the Tarai, this pargana has nevertheless the worst climate. Malaria takes a very severe form, possibly owing to the nature of the soil, which is a friable loam in place of the usual stiff clay. Rice is practically the sole kharif crop, and much less rabi is grown than elsewhere in the Tarai. To encourage the cultivation of maize, one *bigha* of this crop is given free for each plough, but only enough is grown for home consumption. In a year of ordinary rainfall very rich crops of rice are grown; but the Tharu cultivator does not reap the benefit of this so much as the Pilibhit Banjara, who is his banker. The latter provides the Tharu with cash with which to pay his rent, and at harvest time he comes and carries off the rice in return, leaving enough for his subsistence and a little over, with which to buy liquor. The total area of the pargana is 140,706 acres or nearly 220 square miles. Of this 34,356 acres or somewhat over 14 per cent. were cultivated in 1902, at a total rental of Rs. 57,818. The kharif harvest shows an average of about 26,500 acres since 1893, while the rabi covers no more than 15,000 acres, although on account of the comparative absence of irrigation the figures fluctuate greatly from year to year. That the pargana has improved, is obvious from the fact that from 1893 to 1898 the average rent collections were about Rs. 50,000, while since that date they have been in every case over Rs. 56,000. The only canal in the pargana is the Lohia, on

which a masonry regulator was built in 1898, just above the village of Chandeli.

The rental system of Bilheri is somewhat peculiar. In addition to the practice of allowing one *bigha* free for maize, there is another custom by which new settlers are allowed to till lands for the first year on payment of cesses only, and as the rent-rate for the entire pargana was four annas a *bigha* up to the last settlement, this amounted to six pies per *bigha* only. Up to the end of the year 1891 the system known as *sakim-charida* was in force throughout Bilheri. According to this the villages were assessed at seven, six and five annas, according to their position and character. Each field before being cut was inspected by a panchayat, and classed as either *kamil* or *sakim* or *charida*; the first comprised those fields which were estimated to yield more than thirty *sérs* per *bigha*; *sakim* between fifteen and thirty *sérs*; and *charida* less than fifteen. For *kamil* rent was paid on four-fifths of the area, on half for *sakim*, while *charida* was free. The rabi crops were charged in the same way, but at half the kharif rate. The rate for hissadars was one anna less, and that of the padhán two annas less than the tenants. When this system was abolished in 1892, a uniform rate of four annas was imposed for every village, but while this resulted in a considerable gain to the old seven-anna villages it pressed somewhat heavily on those formerly rated at five annas. Consequently Mr. Boas at the settlement of 1898 had to take this question into consideration. He divided the pargana into five tracts. The first comprised the land between the Kamin and the Deoha on the west and the Pandain and the Lohia on the east, from the point where the Pandain joins the latter river; the villages in the north of this tract are very poor and the rate was reduced in some cases to three annas, while in no case does it rise above five annas; some of the villages are of a very fair character, but suffer on account of their distance from the market. The second tract consists of the country between the Pandain and the Lohia above their junction, and the third of that between the Lohia and the Kakra. These two form the central portion of the pargana and the bulk of the villages are of the most flourishing Tharu type. In the third tract there are several villages irrigated from the

Lohia canal, and of these Majhauia, Pachpera and a few others pay as much as five and a half annas, while most of the others pay one anna less. The fourth tract consists of ten villages between the Kakra and the Banbasa forest; those which are close to the jungle still pay four annas, while the rate for the remainder ranges from four to five annas per *bigha*. The fifth tract consists of the nine villages in the *khádir* of the Sarda, which is much lower than the rest of the pargana and is characterized by heavy grass jungle. All of these pay the old rate of four annas.

BISAUD BICHHLA *Patti*, Pargana KUTAUli.

A very small patti composed of ten villages and entirely surrounded by the lands of Kutauli Malli, which it resembles in every respect, forming a single homogeneous tract. It lies on the slopes of the Mukhtesar ridge towards the Sual river and below the Peora dák bungalow. The patti is very prosperous, and the people remain in their homes throughout the year—a fact which accounts for the high standard of cultivation. The same remarks apply to this patti, which have been made in the case of Kutauli Malli. The population in 1901 amounted to 360 at the regular census and to 815 at the preliminary enumeration of the preceding October. The revenue now stands at Rs. 726, whereas in 1815 it was Rs. 115, rising to Rs. 121 in 1820 and Rs. 143 in 1843. In 1870 it was fixed at Rs. 474. The largest villages are Peora and Sun.

BISAUD TALLA *Patti*, Pargana KUTAUli.

This patti is enclosed by Kutauli Talli and resembles it in every respect. It lies on the lower slopes of the Hartola ridge towards the Kosi river, above the road leading from Almora to Khairna and Naini Tal. The physical characteristics are described in the article on Kutauli Talli. The patti is fertile and prosperous. Its inhabitants are rich in ponies and cattle and own considerable estates in the Chilkia Bhabar. The land revenue now amounts to Rs. 602, with an incidence of Re. 0-13-0 per *bisi* of *uparawn* land. In 1815 the land tax yielded Rs. 111, rising to Rs. 156 in 1820, Rs. 198 in 1843 and Rs. 419 in 1870. There are five villages with a total population in 1901

of 157 in March and 786 in the preceding October before the general exodus to the Bhabar. In Chupara and Kamoli most of the inhabitants are Brahmans, the remainder belonging chiefly to Khasiyas.

BISJYULA Patti, Pargana DRYANIRAU.

This patti is bounded on the north by Agar, Chaubhainsi and Malli Rau; on the east by Malli Rau; on the south by Chaugarh and Chhabbis Dumola, and on the west by the latter patti and Chhakhata. The patti was formed from Malli Rau at the settlement of 1870 and consists of 24 villages, of which the most important are Kurauli, Pitakot and Tusrar. There is one patwari for the three pattis of Bisjyula, Chaugarh and Chhabbis Dumola. The patti is formed of three parallel glens running from north to south, comprising the valleys of the Upper Gola from Rai Kund to Khansyun and of two smaller streams, at the head of which are Surung and Churigarh respectively. These two streams rise in the high range of Deothal, an off-shoot of the heights of Chaubhainsi. The Gola valley is the most fertile, with a considerable area of irrigated land which has, however, suffered greatly from diluvion. In the other valleys the villages stand higher up amid the forests, and consequently are exposed to damage from wild animals. Generally the altitude is moderate and well adapted to the growth of chillies and turmeric. The people, and especially those who dwell in the upper villages, go regularly to the Bhabar during the cold weather, and some of them own large estates there. In the Gola valley, however, the land is so fertile that many of the inhabitants stay there for the whole year. On the whole the people are well off and find a ready market for the grain produced in the hills at Mukhtesar. While the assessable area has increased in the last thirty years to 3,041 *bisis* from 2,484 *bisis*, the population has diminished, as many families now live the whole year round in the Bhabar. At the recent census of 1901 the total population was 1,494, of whom 750 were males and 744 females. In the previous October there were 1,668 inhabitants the difference being due to the emigration to the Bhabar in the cold weather. The patti is very inadequately supplied with

means of communication, as it lies remote from roads and the people have to avail themselves of the rough village tracks. The land revenue in 1815 amounted to Rs. 1,038, rising to Rs. 1,377 in 1820 and Rs. 1,675 in 1843. In 1870 there was a further rise to Rs. 2,226, and at the present settlement the demand was fixed at Rs. 3,097.

CHAUBHAINSI *Patti*, *Pargana* DEHYANIRAU.

This is a fairly large patti lying on the slopes of the high ridge that divides Almora from the Naini Tal district. To the north lies Mahruri Bichhli, which also encloses it on the west, and to the south Bisjyula; to the east is Malli Rau. It extends from the Gola glen on the one side to the valley of the Ladhiya on the other. Both these are large rivers which take their rise in the lofty range which extends along the northern boundary of the patti for some six or seven miles, with an average height of 6,500 feet. The patti consists for the most part of dense forests of oak and chfir, in which the villages are mere isolated clearings. They are fourteen in number and are of a fair size as a rule, the most important being Dini, with its hamlets Maithi and Majhauri. The people resort largely to the Bhabar, and only use their hill homes as a sanitarium. Agriculture is consequently neglected and of a poor standard, as all their attention is devoted to their Bhabar estates. The forest has been allowed to encroach on the land measured at the settlement of 1870, but at the same time a great deal of reckless damage has been done in the fine oak forests of the Mornaula ridge for the sake of potato growing. These clearings have now been largely deserted or given over to cereals. There is still a large potato-producing area in the patti near Dini, which has been constituted a Government mahal, the cultivators holding as sirtans. Owing to their possessions in the Bhabar the people are on the whole well off; they own large herds of cattle, for which they find admirable pasture in the hill forests, and which they take down to Chorgallia and the Bhabar in the winter. The people are largely Boras, Mahtas and Kulyals, the two latter being caste names derived from the parent villages. The total population in 1901 was only 265 but in the previous October there were 2,346 inhabitants,

showing that the patti is practically deserted during the winter months.

The road from Dhari to Mornaula runs through the patti along the crest of the high ridge and gives communication with Almora and with the rest of this district. The assessable area has largely increased since 1870, and now amounts to 2,800 *bisws*. The revenue in 1815 was Rs. 808, at which figure it remained practically stationary till 1870, when it was raised to Rs. 1,129. It now stands at Rs. 2,139, including the potato fields. Out of this Rs. 71 are assigned to temples in *gunth*.

CHAUBHAINSI BHABAR, *Tahsil* HALDWANI.

This is the easternmost patti of the Bhabar in this district, extending from the Bhabar Tallades of the Almora district on the east to the Ohhakhata Bhabar on the west. To the north lies the hill pargana of Dhyaniirau, and to the south the Tarai parganas of Nanakmata and Kilpuri. The eastern boundary is the Kamin river and the western the Sukhi or eastern Bahgul. Within these limits are the Nandhaur or Deoha or Dewa or Garra, as it is variously called, which leaves the hills at Chorgallia and its various affluents, such as the Nehai, the Dabha, and many *sots* or watercourses; its great branch, the Kailas, and several small torrents which join the Sukhi. The tract is about 30 miles in length, and the breadth varies from six to twelve miles or more. It is peculiar in that it does not swallow up all the streams which pour into it from the hills; the great majority of these flow through the green forest, not unlike English brooks in the clearness and depth of their water, though some few are mere torrent beds; and hence arise the excessive thickness and rankness of the vegetation in this tract. Some of the cane-brakes and khair thickets are absolutely impenetrable, preventing all cross-paths from clearing to clearing. East of the Dewa the country presents a series of valleys between high elevations, some of the latter covered with *sál* forest and cut up by ravines and entirely waterless. These heights and hollows run in a parallel southerly direction from the hills. The clearings occupy the several hollows, and hence the more plentiful supply of water than is enjoyed by the people of the western Bhabar

where such irregularities of the surface are unknown, at least outside the lower hills. At the same time, the climate is more unhealthy than in the other cultivated tracts of the Bhabar, and cultivation is more subject to the depredations of wild animals. The cultivators are mostly from the hill pargana of Dhyanirau, and communication is extremely difficult owing to the distance to be traversed and the many hill torrents that have to be crossed. The people have generally to take the very circuitous route of the submontane road to Kathgodam and thence to Ranibagh and Bhim Tal. The only other roads are those from Chorgallia to Sitarganj, from Chorgallia to Horai, and from Dolpokhra to Kishanpur, all of which lead away from the hills.

The country between the eastern boundary and the Nandhaur is covered with sál forests and large grassy plains, and is intersected by numerous torrents and ravines which, except for a few pools, are practically dry soon after the rains are over. Owing to the absence of water and the bad climate, it is but slightly cultivated; the spring-level, however, is remarkably high, being about eight feet below the surface, as compared with the 60 feet or more of the rest of the Bhabar. The main block of cultivation lies to the west of the Nandhaur and is known as the Chorgallia circle, so called from the little mart of that name. This block is irrigated from the river, the waters of which are taken up by a canal constructed in 1887-89 at a cost of Rs. 20,000. The canal takes out about $2\frac{1}{2}$ miles above the upper mill, whence irrigation commences. At the mill it throws off an east and west branch, the latter passing through the forest and irrigating the isolated village of Dolpokhra or the submontane road, the former running parallel to the Sitarganj road; the total length of channel is about six miles. This canal is capable of irrigating some 5,000 acres, which is much more than the whole cultivated area. In 1891 the latter amounted to only 2,018 acres.

Besides the Chorgallia circle, there are the two isolated villages of Dolpokhra and Chandni Chauk on the east bank of the Sukhi, and two detached Tharu villages of Nalai and Ransali in the south, which obtain a little swamp water during the rains. The south and south-east portions of the patti have no cultivation, but consist of mixed jungle grazing-grounds. Here

and there in the main block there is some kharff cultivation, and a few of the most hardy hillmen remain to look after the rice crop; but with these exceptions and the two Tharu villages nothing but rabi crops are produced. Chaubhainsi Bhabar contains in all 35 villages, of which five are *mustajiri* and are assessed at Rs. 815. The rest are under direct management.

The total population of this portion of the Bhabar was 4,566 persons in 1891. At the last census of March 1901 there were only 3,586 inhabitants, of whom 2,031 were males. They were almost all Hindus, Musalmans numbering but 124, and being confined to the villages of Khala Bazár and Dilrampur. Of these persons almost the whole are migratory, the remainder being chiefly Tharus. The hillmen are as usual Khasiyas, although large numbers of Brahmans are also to be found among them. There is no village of any size, Chorgallia being the largest, with a population of 430 souls. At this place there is the only market, post-office and school, as well as an inspection bungalow. There is a forest bungalow at Jaulasal and a few shops which supply grain to the timber-cutters of the sál forest. The circle is supervised by a head jemadar located at Chorgallia, in subordination to the tahsildar of Haldwani. He is assisted by a patwari.

CHAUGARH Patti, Pargana DHYANIRAU.

This is one of the largest pattis in the district. It is situated in the south-east corner, and occupies the slopes of the watershed between the Gola and the Chaubhainsi Bhabar, which forms the southern boundary. To the west lies Chhabbis Dumola, which with Bisjyula, Malli and Talli Rau also forms the boundary on the north. To the east is Talli Rau beyond the Almora border. It is combined with Bisjyula and Chhabbis Dumola to form the circle of a single patwari, whose headquarters are at Gargari in this patti. Chaugarh is a very remote tract, and communication with the rest of the district is difficult, as there is no road either to the Bhabar or to Naini Tal. The forest is very dense and covers almost the whole area outside the villages. These are 33 in number, the most important being Bajat Gargari, Patela and Dalkaniya, the last a large Brah settlement. In the rest Khasiyas largely preponderate.

The total population in 1901 was 3,150, of whom 1,714 were males and 1,436 females. In the preceding October, when all the people were still in their hill homes, the total was 3,418. The people of this patti do not migrate to the Bhabar, but in the cold weather they frequently leave the higher villages, called the *urn*, for the clearings or *nayas* in the valleys. The slopes towards the plains are steep, very hot, and covered with forest, both protected and reserved. The high watershed above the Gola is broken by the deep Dalkaniya glen, in the upper portions of which lie some of the best villages of the patti. The corner adjoining Almora is the least developed and poorest portion. The forests are mainly *chir*, which grows here in the greatest profusion, but in the south and east, and especially in the Aligarh valley, there is some very fine *sál* timber. In the clearings turmeric is very largely grown. The ample grazing supports a very large number of cattle, and the sale of *ghí* almost pays the revenue. The protection of the forests has checked the increase of cultivation, but the assessable area is nevertheless 38 per cent. greater than in 1870, and it now amounts to 4,113 *bhis*. The revenue in 1815 amounted to Rs. 418, which rose in 1820 to Rs. 650, and to Rs. 785 in 1843. In 1870 there was a large enhancement to Rs. 1,319, and the demand now stands at Rs. 2,903. There is a school at Gargari.

CHAUTHAN Patti, Pargana DHANIYAKOT.

This patti lies in the north of the district, on the right bank of the Kosi, which separates it on the north and west from Kaklasaun Malla of Almora. To the east lies Kosyan Malla, and on the south are Talla Kosyan and Uchakot. The patti is a populous and well-cultivated tract, consisting for the most part of the deep glen of the Pant Gadhera, which comes down from the heights of Bhatronj and Siun, both of these being reserved forests. While the bulk of the villages are moderately elevated, there are some excellent riparian tracts on the Kosi in Joshikhola and Haldiyuni. The soil is good, and the cultivation of a high character, chillies being largely grown. The houses are of a good class and the people in good circumstances as they profit largely by the proximity of Ranikhet which gives them employment

in the grain traffic between that place and Ramnagar, and also by their Bhabar cultivation. The principal villages are Binkot, Ghagreti, Chyuni, Halpati and Joshikhola, the two last being inhabited by Brahmans, who with Khasiyas form the bulk of the population. The riparian villages of this patti, as elsewhere along the Kosi valley, suffered greatly by the floods of 1880, which necessitated a reduction in revenue of Rs. 198. The demand now stands at Rs. 2,682, as against Rs. 2,223 in 1870. In 1815 the land tax yielded Rs. 442, rising to Rs. 1,431 in 1820 and Rs. 1,580 in 1843. The present assessable area is 2,300 *bisis*. The population has largely increased in the last thirty years, and at the census of 1901 numbered 3,242, of whom 1,605 were males and 1,637 females. In the previous October, before the Bhabar emigration took place, the total was 4,032.

The patti lies within easy reach of Ranikhet, either by the Botalghat bridle road, or by the cart-road from Bhatronj Khal.

CHHABBIS DUMOLA *Patti*, *Pargana* DHYANIRAU.

A small patti lying between Chhakhata and Bisjyula on the north and the Bhabar on the south. To the east lies Chaugarh and to the west Chhakhata. The patti was formed in 1870 from Malli Rau. There is but one patwari for the three patts of Bisjyula, Chhabbis Dumola and Chaugarh. The patti lies on either side of the large watercourse which issues from the Malwa Tal lake to its junction with the Gola, and extends across the outer ranges above the left bank of the Gola to the Bhabar. It consists of 22 villages, of which as many as 17 belong to the Sambhals of Babiarrh, so that the patti practically forms a single estate. The Sambhals assert that in former days they were ruled by their own Raja here. The villages generally lie low and the climate is hot, but the land is consequently well adapted to the growth of turmeric and chillies, large quantities of which are yearly exported. The land, however, in the neighbourhood of the Gola and the Malwa Tal stream is precarious, owing to the constant floods and slips, whole stretches of cultivation having been carried away during the past thirty years. The few upland villages are mere clearings in the dense forest which harbours a number of wild

animals, which do a great deal of mischief. There is, however, an abundance of grazing and cattle are numerous. While the people are beyond the reach of want, the standard of comfort is not high and the patti suffers from its remoteness. Roads are greatly needed in this tract, as there are scarcely any means of communication with the outside world. The population in 1901 numbered 1,573, of whom 816 were males and 757 females; most of the people reside in their homes all the year round, and do not migrate to the Bhabar. The only large villages are Babiarrh and Purwar. The assessable area amounts to 1,300 *bhis* and the revenue now stands at Rs. 1,327. In 1815 the land tax yielded Rs. 295, rising to Rs. 320 in 1820 and Rs. 468 in 1843. In 1870 the patti showed a considerable improvement and the demand was raised to Rs. 1,067. There is a school at Babiarrh.

CHHAKHATA *Patti and Pargana.*

Chhakhata Pahar is the largest patti in the district and forms a pargana by itself. It consists of 61 villages, the majority of which lie in the Ballia glen and on both sides of the high ridges that flank it from the exit of the lake at Naini Tal down to the debouchement of the river at Kathgodam. The patti is bounded on the north by Dhaniyakot, Mahruri Palli and Bisjyula; on the west by Kotah Malla; on the east by Chhabbis Dumola; and on the south by the Chhakhata Bhabar. It thus includes the whole basin of the Ballia and Gola rivers, the Bhim Tal, Naukuchhiya Tal and Sat Tal lakes. The central plateau near Bhim Tal contains some of the finest stretches of cultivation in the hills, the chief estates being Mahragaon and Pandegaon. The people are as a rule extremely prosperous—a result that is largely due to the open nature of the tract, roads running in all directions. The constant increase of traffic along the cart-roads from Kathgodam to Naini Tal and Ranikhet means more money and opportunities for the villagers, who open shops, ply carts, and do a thriving trade in fruits and vegetables. A large area in the western half consists of reserved forest, and cultivation has fallen off somewhat; in the east, however there is still room, in the neighbourhood of Bhim Tal

for considerable extension. Potatoes are grown everywhere for the Naini Tal market, and there is a considerable traffic in milk, which is brought into the station from villages as far distant as ten or twelve miles. In the hot weather people come with their buffaloes from Almora for this purpose, settling in the numerous *chaks* of Belwa Khan and elsewhere. The largest villages of the patti are Ranibagh, Belwa Khan, Bhurkanda, Chupra and Jeolikot.

The dependence of the patti for its prosperity on the station of Naini Tal is one of its chief characteristics, as well as all the opportunities for miscellaneous employment and for the disposal of produce. Another important feature is the proximity of the fertile Chhakhata Bhabar, much of which is held by inhabitants of this patti and notably the Thokdars of Mahragaon. Owing to the great general increase of prosperity in this tract, there has been a considerable enhancement of the revenue at the last settlement. The demand now stands at Rs. 6,356, whereas in 1870 it was Rs. 4,082. In 1815 the demand was Rs. 1,519, rising to Rs. 1,698 in 1820 and Rs. 2,204 in 1843. The present incidence is Re. 0-15-0 per *bisi* of second class *uparoun* land, the soil unit of the settlement. Some 350 *bisis* are held rent-free or in fee simple. The bulk of the people are Doms, Khasiyas and Brahmans and the total population in 1901 numbered 7,914, of whom 4,634 were males and 3,280 females. At the preliminary census of the hill tracts in October, 1900, the total for the patti and pargana was 9,100 persons, but these totals exclude the settlement of Naini Tal. Agriculture and trade are such profitable employments that the people, and especially those in the neighbourhood of Bhim Tal, have come to look with especial aversion upon their duties of giving *utar* and *bardaish* when required, as they are bound to do by their settlement contract. While their real reason is that they can employ their time so much more profitably in their own occupations than by earning the wages of labour, they plead physical inability owing to the climate of the Bhabar and the exhaustive nature of their agricultural toils, and also, in the case of the Brahmans, urge that such work is prejudicial to their caste principles—a contention that hardly holds in the interior, and among Brahmans

of the same race. It is true, however, that a far larger number of travellers visit Bhim Tal than any other place in the hills, with the exception of course of the large hill stations, and on this account the people were in 1901 allowed to pay a cess for the up-keep of a gang of coolies and a jemadar, with the proviso that the engagement of the settlement should be in no way infringed in the case of officers belonging to the district.

The patti is exceptionally well provided with means of communication. The station at Kathgodam gives access to the railway and the outside world, while there a cart-road leads from Kathgodam to the Brewery, whence one branch ascends the hill by a circuitous route to Naini Tal and the other crosses the Ballia river and winds round the spur of Kalekhan to Bhowali and Ranikhet. In addition to these there are many bridle-roads: from Kathgodam one leads to Naini Tal, following the valley of the Ballia; another crosses the river at Rauibagh and goes to Bhim Tal and Almora *via* Ramgarh; another goes from Naini Tal to Ramgarh and Almora with branches to Bhim Tal, Dhari, Mukhtesar and Malwa Tal. From Naini Tal also roads lead to Kaladhungi, Kilberry, joining the road from the Bhabar to Ratighat *via* Pangot, and to Khairna on the Ranikhet cart-road.

Chhakhata is said to derive its name from 'khat,' a lake, and the word 'khashti' or sixty, although it would be very difficult to identify the whole number.

CHHAKHATA BHABAR, *Tahsil* HALDWANI.

This is the central patti of the Bhabar, lying between the Chhaubhainsi Bhabar on the east and Kotah Bhabar on the west. To the north lie the hill pattis of Chhakhata and Chhabbis Dumola, and to the south the Tarai parganas of Kilpuri, Rudarpur and Gadarpur. The northern boundary is formed by the base of the hills which in this patti rise up abruptly from the plains; on the west by the Bhakra river, and on the east below the submontane road by the Sukhi. The patti is a large one, but the greater part of it is forest and jungle. Besides the rivers already mentioned, there is the Gola, which emerges from the hills at Kathgodam and flows in a wide bed southwards into Kilpuri where it takes the name of the Kichha. The patti

well provided with means of communication. It is traversed from south to north by the Rohilkhand and Kumaun Railway, which has stations at Lalkua, Haldwani and Kathgodam, where the line terminates. Parallel to this and on the west side runs the metalled road from Naini Tal and Ramnagar to Haldwani, Kichha and Bareilly. This is crossed at Haldwani by the main submontane road from Chorgallia to Kaladhungi and Ramnagar. Other roads are those leading from Haldwani to Rudarpur and Rampur, to Pipalparao and Barakhera, and to Sitarganj.

The cultivated portion of the patti is composed of two blocks lying on either side of the Gola river and altogether covering some 21,000 acres, of which practically the whole is irrigated from the Gola by means of canals on either side of the river. In addition to these, a small masonry channel irrigates an inconsiderable area about Fatehpur. The eastern or Golapar block comprises three patwaris' circles and consists in all of 44 villages, of which eight are zamindari, eight *mustajiri* and 28 directly-managed. The soil is for the most part good, and as the tract is protected by the Gola and the Sukhi, cultivation is not exposed to the ravages of wild animals, except at the extreme limits. The tenants are a well-to-do body, mostly coming from the neighbourhood of Bhim Tal and Ramgarh. The total revenue of the circle, as assessed by Mr. Roberts, was Rs. 23,054. The usual rate is ten annas per *bigha*, but the villages on the edge of the forest pay a rent ranging from six to eight annas. The Golawar or Haldwani circle lies on the right bank of the Gola, and between that stream and the Bhakra. It comprises some 16,000 acres of cultivated land, chiefly irrigated from the canal taken out of the river above Kathgodam; although Fatehpur, Chaunsila and a few other villages are watered from other sources. The block contains five patwaris' circles and 135 villages, of which 21 are zamindari, fifteen *mustajiri* and 99 under direct management. The revenue, as assessed by Mr. Roberts, was Rs. 59,451, the general rate being ten annas a *bigha*.

The population of the whole patti at the last census numbered 38,533 persons, of whom 21,695 were males. Musalmans numbered 3,921 persons; the greater part of them reside in Haldwani and Kathgodam which are the principal towns.

Besides these, there are no other villages of any size or importance. About one-third only of the inhabitants are permanent residents, the rest being hillmen who migrate to the Bhabar in the cold weather.

The canal system of this patti has been dealt with more fully in Chapter II. In former days some trouble was caused by the difficulties attendant on the distribution of canal water. There are several old villages occupied since the time of the Chands, such as Khera Malla and Talla, Dyula and Kuapur occupied by Mahras, on the left bank of the Gola. Malla and Talla Bhamauri and Bhitauriya, Fatehpur and Paniyali on the right bank belong to Sauns and Hairis from the neighbourhood of Bhim Tal. Under the former administrations the prosperity of these villages was very precarious, owing to the great insecurity of life and property, which were only partially preserved by the payment of "black mail" to the headmen of the Mewati robbers. When the British rule introduced an improved police administration (though till recently a very defective one), we find the Nayaks and other inhabitants of the Ramgarh mountains behind the Gagar ridge descending into the plains, and appropriating the lands next below those above named. In this manner Mukhani, the two Haldwanis and Kusm-Khora were colonized. At the time of their first settlement there was a large quantity of spare water, but with the great subsequent influx of cultivators into the Bhabar the monopoly of the means of irrigation by the Nayaks became excessive, whilst, although their rapidly-increasing cultivation demanded a more heavy assessment, the revenue of the villages was maintained at *nayabad* or newly-cleared rates. The increase in the demand effected by Mr. Batten still left the incidence of the revenue less than in Kotah. In all the upper and central portion of Bhabar Chhakhata the cultivators are hillmen. In the old settled villages the tenure is the same as in the hills, and the several shareholders either cultivate their lands themselves, or take their chance every season of finding temporary tenants and labourers among the large population, which comes down annually to the Bhabar. In almost all the newly-established villages whether of Mr Tralls time or Mr Batten's the tenure

is *zamindari*, and the proprietary right is vested in the fiscal representatives of those who first obtained the lease.

CHHOI, *Patti* KOTAH BHABAR, *Tahsil* HALDWANI.

A village on the submontane road, at a distance of three miles from Ramnagar and four miles from Belparao. From here the road branches off to Naini Tal, passing Kotah at a distance of eight miles. Another branch takes off in a southerly direction to Sultanpur on the main Tarai road, with a total length of ten miles. Being thus of some importance as a road junction an inspection bungalow belonging to the Government Estates has been built here. The village is quite insignificant; it lies in 29° 22' north latitude and 79° 9' east longitude.

CHILKIA BHABAR, *Tahsil* HALDWANI.

This is the westernmost subdivision of the Bhabar, being bounded on the west by the Garhwal and Bijnor districts, from which it is separated in places by the Ramganga and the Phika rivers. To the north it is bounded by Garhwal and Almora, and to the east by the Kotah Bhabar, from which it is separated by the Kosi river as far south as the submontane road, while below Ramnagar the present boundary runs along the road, across the Kosi and Dabka, to within a short distance of Belparao, whence it turns south again to the Tarai. The southern boundary of the patti is formed by the Tarai pargana of Bazpur and beyond the Kosi by that of Kashipur. With the exception of the portion lying north of the submontane road, which consists chiefly of reserved forest of the Garhwal division, the Chilkia Bhabar is separated from the hills, and in its general aspects rather resembles the Chhakhta Bhabar than Kotah, although in many ways it differs from the rest of the tahsil and the southern parts of it greatly resemble the Tarai. The chief river is the Kosi, but besides this there are the Dabka in the south-east, the Dhela in the centre, and the Pathariya in the west. Beyond the last-mentioned river the Garhibulchand forest extends to the banks of the Phika and in this tract there is but the single village of that name on the extreme western boundary. The patti is somewhat poorly supplied with roads at least in the

western half. It is traversed from east to west by the main submontane road from Haldwani to Belparao and Ramnagar and thence westwards by Sawaldeh and Laldhang to the Bijoor boundary. From Ramnagar runs the main road to Chilikia, Kashipur and Moradabad, while this continues northwards as the Ranikhet cart-road, crossing the Kosi at Garjia, whence a branch runs north-westwards to Pauri in Garhwal. The population of the Chilikia Bhabar at the last census numbered 20,556 persons, of whom 11,112 were males. Classified according to religions, there were 17,566 Hindus, 2,869 Musalmans and 121 others, chiefly Aryas. The numbers are more stable than in the rest of the Bhabar, that is to say, fewer inhabitants migrate to Chilikia from the hills than in the other patti, and the greater portion of the population remain here throughout the year, as the proportion of *desi* cultivators is higher than elsewhere in the Bhabar. The bulk of the Hindu inhabitants are Khasiyas, Telis and Chauhans, while there are large numbers of Doms. The Muhammadans consist chiefly of Pathan settlers from Rohilkhand. There are altogether 149 villages, of which the chief are Chilikia, Sawaldeh, Laldhang, Tanda and Dbela. For practical purposes the headquarters of the patti are at Ramnagar, where the peshkar resides. Chilikia is a very insignificant place, two miles from Ramnagar, on the road to Kashipur. Chilikia was transferred to Kumaun from Moradabad in 1859.* As at present constituted, the cultivated portion of the patti consists of three blocks or circles known as Gaibua, Kosipar and Chilikia proper. Both Gaibua and Kosipar lie to the east of the Kosi river. Gaibua comprises that portion which lies east of the Dabka and south of the submontane road, and consists of seventeen villages all held under direct management. It is irrigated from two canals, one fed from the Kicheri, a tributary of the Dabka and supplemented in the rains from that river, while the other takes out of the Dabka at Pawalgarh. The former was completed in 1895 at a cost of Rs. 6,500; only a part of it is lined with masonry as it generally runs through a good stiff soil. The Kosipar circle is also entirely under direct management. It lies between the Dabka and Kosi and comprises 32 villages. It

* G. O. No. 938 of June 10th, 1859.

is chiefly irrigated by a masonry canal taking out of the Kosi at Belgarh, opposite Ramnagar, which is supplemented by unlined channels from the Dabka. This canal was considerably damaged by the flood of 1894, which carried away a wide strip of land from Belgarh and breached the channel, necessitating a diversion and a new aqueduct across the Belgarh ravine. The villages of this circle are well watered and prosperous, but further extension of cultivation is barred, as the Dabka and Kosi always tend to join each other and wash away the cultivated land, so that further development can only take place in a southern direction. The Chilkia block west of the Kosi is divided into four patwari circles and consists of fifteen zamindari and 89 directly-managed villages. Irrigation of the lands between the Kosi and the Sawaldeh rivers is effected by two systems, known as the Ramnagar and Chilkia, though both take out at Lakhua, a mile above Ramnagar on the right bank of the river. A description of these canals will be found in the general account in Chapter II. Beyond the Sawaldeh river are four villages, Sawaldeh, Dhela, Laldhang and Garhibulchand; the last of these is unirrigated, while the others depend on channels taken out of the local streams by the villagers themselves. To the south, below Bankua, are nine Bhuksa villages, irrigated from the swamps above them by the cultivators.

The villagers in this part of the Bhabar are of an entirely different class from those met with in the east. Here we find large numbers of plainsmen, who are not to be seen on the Haldwani side. Most of the headmen or padhāns come from the hills, and bring a small following of their own from their villages. The appearance of the villages is also more of the plains type than in other parts of the Bhabar, the houses being close together and not scattered over the fields as elsewhere. Another difference is that here, as in the plains, mixed crops are cultivated, such as wheat and peas, gram and rape. Sugarcane, too, is more popular here than in other parts of the Bhabar.

The first settlement of Chilkia was made in 1838 by Mr. Rowland Money. No proprietary rights were recognised and the revenue payers were all treated as *mustajirs* or *farms*. Rents were fixed with reference to the actual area cultivated, the

farmer being at liberty to extend cultivation within the nominal boundaries of the estates. In 1851, Mr. Thomason gave orders to Collectors to bestow proprietary rights on persons whom they considered entitled to the same. Under these orders the Collector of Moradabad attempted to confer such rights on the farmers of the settlement, and this not only in respect of all cultivated and culturable land in a village, but also of a vast area of waste land. This, however, was not approved by Government, and in 1852 it was decided that only a suitable area should be marked off in each village. In 1858 Colonel Ramsay applied for the transfer of Chilkia to Kumau, proposing that the zamindari rights of the Raja of Kashipur, who was the chief proprietor, should be exchanged for rights elsewhere. This was sanctioned in the following year. At first, Sir Henry Ramsay held all the villages under direct management, but in 1875 fourteen villages were settled, the Government share being taken at 55 per cent. This system was retained at Mr. Roberts' settlement of 1890, the rates varying from ten annas to four annas per *bigha*, according to the quality of the land.

CHORGALLIA, *Patti CHAUBHAINSI BHABAR, Tahsil HALDWANI.*

Chorgallia or "the thieves' passage," a name derived from the time when it formed a resort of dacoits, is a village at the mouth of a pass where the Nandhaur river debouches from the hills on to the open country of the Bhabar. It lies at a distance of twelve miles from Haldwani and 27 miles from Tanakpur, and is situated on the submontane road. A second road comes from Sitarganj through Kilpuri, a total distance of 14 miles. There is an Estates bungalow here and also a bungalow belonging to the Forest Department, which has a large area of valuable sal forest in the neighbourhood. The village contains an excise and drugs shop, a school, post-office, and a chauki where the minor forest produce of the district protected forests is collected and sold. The Chorgallia canal system has its head-works here. Communication northwards is greatly hampered by the absence of a proper road which is much needed by the inhabitants of Dhyaniarai. Chorgallia lies in latitude 29° 7' north and longitude 79° 43' east, it gives

its name to the only cultivated circle of the Chaubhainsi Bhabar.

DHANIYAKOT Pargana, Tahsil NAINI TAL.

This pargana lies on the north of the district along the northern slopes of the western Gagar range. It is bounded on the south by the two pattis of Kotah Pahar and pargana Chhakhata; on the east by Ramgarh and Kutauli, and on the north and north-west by the Almora district. The northern boundary and the eastern and western extremities is the river Kosi, but in the centre it cuts off a small portion from the rest of the pargana. Dhaniyakot consists of six pattis, known as Dhaniyakot, Uchakot, Simalkha, Chauthan, and Kosyan Malla and Talla. Previous to the constitution of the district in 1891 there were only four of these subdivisions, but in that year the two Kosyans were taken from Phaldakot of Almora and given to Naini Tal. The parts lying to the north of the Kosi are Chauthan, Kosyan Malla and a portion of Kosyan Talla. Each of these pattis have been separately described in detail, and reference must be made to these articles for a description of the tract and its general characteristics.

As in the east of the hill pattis, so too in the west, communications are poor. A road runs from Naini Tal northwards to Ratighat on the Ranikhet cart-road which goes to Khairna on the Kosi, but this only serves the Dhaniyakot patti itself. Another road runs from Ramgarh to Ratighat and thence past Badlakot and Pangot to Dechauri. A third goes along the Kosi to Betalghat and Dhikuli above Ramnagar, and is largely used at the time of the annual migration to and from the Bhabar, but there is a great need of good road communication between the Binaik-dhura ridge and both Naini Tal and the Kotah Bhabar. In the western pattis the inhabitants have either to use the village paths to reach their lowland cultivation or else have to go by a very circuitous route along the Kosi. The population of the pargana at the last census was 10,593, of whom 5,701 were males; but this was taken at a time when many were absent from their hill homes. In the preliminary enumeration of October 1900 there were 14,153 inhabitants. In the villages

of the Kosi valley the soil is rich and the cultivation permanent, but elsewhere potatoes are the staple crop. In Chauthan the villages are large and flourishing, though few in number. In the other pattis the largest villages are Tallakot, Dhuna and Simalkha. The total revenue of the pargana by the last assessment is Rs. 12,922. Eleven villages of Dhaniyakot are held revenue-free by the Shastris of Sunoli in Siunara Malla of Almora, and there are a few lands held in *gunth* and assigned to temples.

DHANIYAKOT *Patti*, *Pargana* DHANIYAKOT.

This, one of the largest pattis in the district, extends from the peaks of China and Liriya Kanta on the south to Khairna on the Kosi on the north, this river separating the patti from Chaugaon of the Almora district. To the east lie Kutauli Talli, Malla and Talla Ramgarh; to the west Simalkha; and to the south Chhakhata and Kotah Malla. Most of the villages lie between the Ratighat stream and Khairna, but there are others in the Ninglat glen as far as the Bhowali camping-ground and on the western slopes from Hartola between the Kosi and the Ramgarh stream. There is a large area of reserved forest, comprising most of the southern portion of the patti, and since the demarcation of the forest boundaries a good deal of land has fallen out of cultivation. Most of the villages are lowlying and distinctly fertile, especially along the Kosi, but a large and valuable area of *talaun* land was destroyed by the floods of 1880. To the east of China peak lie three Government mahals, consisting entirely of potato cultivation and administered by the Deputy Commissioner with a fixed rent of Rs. 2 per acre. As the great majority of the villagers migrate during the cold weather to the Bhabar, cultivation is somewhat desultory here, except in the group of lowlying villages round Mallakot. The people are as a rule extremely well off; they live in houses of a superior class and find that they can easily pay their revenue with potatoes, while they concentrate their main energies on the Bhabar. The cultivated area of the patti is 1,323 *bisis*, excluding the potato mahals. The total revenue now stands at Rs. 4,725, giving an incidence of Rs. 1-2-4 per soil unit, or *bisi* of 2nd class *uparaun* land for the whole patti or Re 0-15-1 excluding the potato fields. In

1815 the land-tax was Rs. 1,448, rising to Rs. 1,933 in 1820, and Rs. 2,030 in 1843. In 1870 the jama was Rs. 2,265 and subsequently, at the expiry of the last settlement, Rs. 4,370, the enhancement being due to the land taken up for potato cultivation. There are in all 40 villages in the patti, mostly with very small populations, chiefly composed of Khasiyas and Brahmans. At the census of 1901 the total was 2,434, but in October 1900 the preliminary census showed 4,648 inhabitants. There are no Musalmans except at the dāk bungalows of Khairna and Ratighat and close to Naini Tal. The patti has ample means of communication. The Ranikhet cart-road passes through the Ninglat valley to Khairna, being joined at Ratighat by the bridle-road from Naini Tal. Another bridle-road leads to the Bhabar through the Budlakot valley in the western portion, leaving the patti at Pangot. In addition to these there are numerous forest roads, the most important being that from Naini Tal to Kilberry and Pangot. The largest villages are Bajeti, Dhuna, Bhowali and Patli.

DHANPUR, Pargana GADARPUR, Tahsil KICHHA.

Dhanpur is a small estate in the centre of the pargana belonging to His Highness the Nawab of Rampur, who holds sovereign rights therein. Owing to the difficulties that naturally arise from the situation of this territory, an exchange has from time to time been suggested, but the proposal has met with no success. The tract consists mostly of sál jungle and only contains one village, Dhanpur-Bijaipur, of any importance. At a short distance from the village, which lies some five miles north-east of Gadarpur on the road from Barakhera to Pipalparao, there is a bungalow belonging to the Nawab. Dhanpur is situated in latitude 29° 4' north and longitude 79° 17' east.

**DHIKULI, Patti KOTAH BHABAR, Tahsil
HALDWANI.**

A village on the right bank of the Kosi river, in latitude 29° 28' north and longitude 79° 9' east, at a distance of six miles above Ramnagar on the Ranikhet cart-road and 50 miles from Moradabad and at an elevation of 1,380 feet above the sea.

The site is on a slope and rather resembles the villages of the hills than of the Bhabar, as do several others of the Patkot Dun, the name given to this circle of Kotah Bhabar. The village is a good one and is irrigated from a small canal taken out of the Kosi. It deserves mention, however, only on account of its archaeological interest. On the western limit of the cultivated fields of Dhikuli and in many places overhanging the main road is a ledge of conglomerate rock surmounted by extensive *chauris* or levels, intersected by a few ravines. On one of these the remains of ancient buildings have been found lying at a few feet below the surface. The place has never been scientifically excavated, but many fine specimens of capitals, medallions, figures of animals and other Buddhistic designs have been brought to light. Many of these have been used in a building near the bridge as ornaments for archways and pillars, and others are to be seen worked into the wall along the roadside and elsewhere. On a plateau above is an ancient well. Other remains have been found higher up the road at the Kua-ka-Chaur near Mohan. Dhikuli is locally identified with Vairatpatan, the capital of the old kingdom of Govisana, although General Cunningham inclined to favour Kashipur instead. The local theory is that this kingdom extended from the Bhabar as far as Ganai or Chaukuttia in Almora above Dwarahat.

DHYANIRAU Pargana, Tahsil NAINI TAL.

This is the easternmost and the largest of the hill parganas. It is bounded on the north and east by the Almora district, on the south by the Chaubhainsi and Chhakhata Bhabars, and on the west by Pahar Chhakhata and Mahruri. It is composed of the patts of Chaubhainsi on the north, Malli Rau on the east, Bisjyula in the centre, and Changarh and Chhabbis Dumola on the south. The pargana was somewhat altered at the formation of the Naini Tal district in 1891, when Talli Rau was removed and given to Almora. The upland portion of the pargana occupies the basin of the Ladhiya river from Debidhura in Almora to the Bhabar. Further west is the valley of the Gola, while the southern range of hills overlook the valley of the Nandhaur

Each of the pattis has been separately described, and reference must be made to the several articles for a fuller description of the tract. As a whole it presents some very diverse characteristics. In Chaubhainsi agriculture is at a minimum, and the inhabitants depend wholly on their cattle in the hills and their Bhabar cultivation in the cold weather. In Malli Ran, on the other hand, the soil is very fertile and the agriculture of a high standard. The total revenue demand of the pargana, according to the present assessment, stands at Rs. 12,180; but of this Rs. 4,176 are assigned in *gunth* to various temples, the net amount payable to Government being Rs. 8,003.

The population of the pargana at the last census numbered 7,364 persons, of whom 3,793 were males. This enumeration was made, however, in March, 1901, at a time when large numbers of the inhabitants were absent in their Bhabar villages; at the preliminary enumeration of the previous October the total was 10,005 persons. The Dhyaniwan people frequent the Chorgallia circle of the Chaubhainsi Bhabar, descending by the Nandhaur valley by means of the village paths, for the greater part of the pargana is destitute of roads, and they have no direct route to take them to their cultivation and grazing-grounds in the Bhabar. There are several large villages, such as Babiwarh and Kala Agar; but the only roads are those from Dhari to Bhim Tal and Mukhtesar in the north and the continuation of the former to Mornaula in Almora, as well as the poor road from Malwa Tal to Bhim Tal.

GADARPUR, *Pargana* GADARPUR, *Tahsil* KICHEHA.

The capital of the pargana is a small village a mile south of the main Tarai road, and a little to the east of the Baur river. It lies in latitude $29^{\circ} 2'$ north and longitude $79^{\circ} 14'$ east, at a distance of ten miles from Rudarpur and twelve miles from Bazpur. Haldwani is 23 miles off *via* Pipalpara, and Kaladhungi 22 miles. Gadarpur is the headquarters of the peshkar, and contains a tahsil building, police-station, post-office and dispensary. There is also an Estates bungalow here. It is one of the most unhealthy places in the Tarai. Gadarpur itself contains a population of 413 persons—nearly half of whom are Turks. Almost adjoining it to the north is the larger village of

Barakhera on the main road with 583 inhabitants, almost all of whom are Musalmans, and here is the chief bazār of the pargana, the market day being Sunday in each week. Both Gadarpur and Barakhera are fine villages, irrigated from the Khajjia canal, and are mainly assessed at six annas per *bigha*, although the eastern portion of Barakhera lies low and is surrounded by grass jungle; here the cultivation is carried on by Bhuksas, who only pay four and a half annas. Near Gadarpur there is an old mosque about 120 years old, one of the few remaining relics of the Pathan occupation of the Tarai.

GADARPUR Pargana, Tahsil KICHHA.

This pargana lies in the western half of the Tarai, between Bazpur on the west and Rudarpur on the east; to the north lies the Kotah Bhahar, to the north-east the Chhakhata Bhahar, and to the south the Suar and Bilaspur tahsils of the Rampur State. The headquarters of the pargana are at Gadarpur, where the peshkar resides. The pargana contains 65 villages, of which three—Kankatta, Rajpura and Kuakhera—are zamindari and all the rest are under direct management. The largest and most important are Gadarpur and the adjoining village of Barakhera; Lamakhera, Kankatta, Kulha and Sakenia. In the centre of the pargana is the small estate of Dhanpur-Bijaipur, which belongs to His Highness the Nawab of Rampur, and which has been separately mentioned. In 1881 the population of the pargana was 18,982 persons, but since that time it has been steadily on the decrease, and at the census of 1901 there were only 14,723 inhabitants, of whom 8,247 were males. Musalmans predominate in this pargana in the ratio of about five to four, numbering 8,549 in all. They are mostly Turks and Pathans. Panwar Rajputs, Lodhs and Bhuksas form the prevailing Hindu castes. The chief rivers of the pargana are the Baur in the west and the Bhakra in the east, while further east again is the Dimri. The Bhakra is very liable to floods, which annually do considerable damage, but at the same time it is of great value for irrigation purposes. The principal road is the main Tarai road running through Barakhera; the Baur and the Bhakra rivers are both unbridged but bridges exist on the Nihal and the Dimri. There

is also a small road from Barakhhera to Sakenia, while another road connects Barakhhera with Pipalparao and Haldwani. From this a branch road runs to Dalpura in Bazpur. The pargana has two markets, at Barakhhera in the centre and at Sakenia in the south-west, and in addition the Khelakhhera market of pargana Bazpur is largely used by the villagers of the western side. There are outstills and liquor shops at Barakhhera, Sakenia, Lamakhhera, Kulha and Khanpur.

The total area of the pargana is 71,965 acres or 112 square miles. Of this 17,755 acres or over 24 per cent. were assessed in 1902 at a rental of Rs. 35,677. It is the best irrigated of all the Tarai parganas, having an ample supply of water from the three large canals known as the Jeonar, Khajjia and Bhakra; on the other hand it lies very low and becomes largely submerged in the rains, and is very much more unhealthy than Bazpur. Except in the few villages between the Baur and the western boundary very little maize can be grown, though the rice crop is always assured by the excellent system of irrigation. The kharif is the more important harvest, averaging over 14,000 acres, of which three-fourths are irrigated, but the rabi is also of considerable value, covering over 10,500 acres on an average. Generally speaking, the pargana is improving, in spite of the drop in population, for the rents show a steady increase since 1893, when Mr. Roberts found it necessary to lower the rate all over the pargana in consequence of the Bhakra flood.

The pargana falls naturally into three tracts. The first comprising those villages in the west of the Baur, the second those between the Baur and the Bhakra, and the third those between the Bhakra and the Dimri. The first tract comprises four Bhuksa and three Musalman villages; the first are all irrigated from the small earthen dams in the Gangli, Chagra and Baur streams and are assessed at four and a half annas, while the three other villages are irrigated from a large earthen dam on the Gangli; they stand high and grow excellent maize and rabi, and are assessed at a rate ranging from five to six annas according to the distance from the jungle. The second tract is the canal-irrigated portion and also contains two isolated Bhuksa villages Khampur and Kapa which are watered from the

Kakrala and Kali Kinch streams; these are assessed at four annas six pies. The Jeonar canal irrigates the south-west of the pargana, and the villages are all fairly good and pay rates ranging from five to six annas. These are watered by the western branch known as the Ramsagar, while the eastern branch irrigates five other villages, all of which pay six annas. The Khajjia canal waters the central portion of the pargana, including Gadarpur and Barakhera, the quality of which varies considerably, the rates ranging from four annas and a half to seven annas. The Bhakra canal irrigates nine villages in the east of the circle, most of which are liable to flood from the Bhakra and chiefly grow only rice; most of them are assessed at the usual rate of four annas six pies. It also waters six villages in the south inhabited by plainsmen; the latter vary in quality, some of them standing high and paying six annas, while the others which lie low or else border on the heavy tree jungle of the Dinri are more leniently treated.

HALDWANI, *Patti CHHAKHATA BHABAR,*
Tahsil HALDWANI.

A considerable town, in latitude $29^{\circ} 13'$ north and longitude $79^{\circ} 32'$ east, lying at the foot of the hills, with an elevation of 1,434 feet above the level of the sea, on the road from Bareilly to Naini Tal, at a distance of 16 miles from the latter. Its name is derived from the haldu trees (*Adina cordifolia*) which abound in the neighbourhood. The place was founded by Mr. Traill in 1834 as a mart for the hill population living for a portion of the year in the Bhabar. Since 1850 the grass huts that at first were sufficient have been replaced by substantial masonry houses and a great part of the population is now permanently resident, the climate having been greatly improved by the many clearances in the vicinity. It is now the chief centre of commerce for the Bhabar, and the opening of the railway has greatly enhanced its importance. The town is now the headquarters of the Kumaun Division and of the district of Naini Tal during the cold weather, the officers migrating here from October to April. This arrangement has many advantages. It is only during the winter months that it is possible to

camp in the Tarai and Bhabar owing to the unhealthiness of this part of the district during the hot weather and rains. Moreover a large proportion of the hillmen descend to the Bhabar after October, and thus Haldwani holds a far more central position for the administration of the district than Naini Tal, which in the winter is often very cold, the station being frequently covered with snow, so that access is difficult. Besides, Haldwani is quite as accessible for nearly all the hill patts as Naini Tal itself. The town contains a tahsil, police-station and dispensary, as well as a sessions house, Public Works Department bungalow and quarters for the Superintendent of the Tarai and Bhabar. Close by on the east is the bed of the Gola river, which is largely used for irrigation. Between this and the town is the Rohilkhand and Kumaon Railway with a station here. Most of the neighbouring land belongs to the Nayaks of Ramgarh, who have fine houses and gardens here. Besides the road to Naini Tal and Bareilly, the submontane road passes through the town from Ramnagar on the west to Tanakpur on the east, *via* Chorgallia and Jaulasal.

The population of Haldwani in 1901 numbered 6,624 persons, of whom 4,110 were males and 2,514 females. In 1891 the total was 4,947, which shows a rapid development during the following ten years. Classified according to religion there were 3,327 Hindus, 3,198 Musalmans and 99 of other religions, chiefly Christians, with a few Buddhist traders from Tibet. The Musalmans are mainly Banjaras, who make the place their depôt from which they carry their goods to Almora, Naini Tal, Ranikhet and the other hill markets.

Haldwani was constituted a town under Act XX of 1856 in 1885, and on the 1st of February, 1897, it was converted into a municipality; on the 1st of April 1904 it was reduced to the position of a notified area under Act I of 1900. The total income in the year 1900-1901 amounted to Rs. 10,149-2-0, showing an increase of Rs. 1,078-3-0 over the previous year. The principal sources of revenue since 1891 are shown in the appendix.*

There is a still here for the manufacture of country spirit, which supplies the shops at Naini Tal, Haldwani and Ranikhet.

Haldwani is used, when occasion requires, as a plague disinfecting station for all persons coming by rail from infected areas, and a temporary plague hospital has been erected. Besides the ordinary traders and travellers large number of pilgrims halt here on their way to the great shrines in Garhwál, and the presence of these people in their thousands adds largely to the prosperity of the place. There is a mission school in the town which has achieved some measure of success, but which is greatly handicapped by the fluctuating nature of the population, the average daily attendance for the year being less than half that of the month of September.

HALDWANI *Tahsil.*

There is but one tahsildar for the whole of the Naini Tal Bhabar, which comprises the patts of Bhabar Chaubhainsi, Bhabar Chhakhata, Bhabar Kotah and Chilkia. The headquarters are at Haldwani. The tract is, however, subdivided into separate charges: for Kotah Bhabar and Chilkia are under the control of the peshkar of Ramnagar, while the naib-peshkar of Kaladhungi has charge of that circle and parts of Kotah. The Bhabar has been already described in the general account of the district in all its aspects, and therefore need not be here separately treated. The physical characteristics, cultivation, crops, communications, fiscal history and administration have been dealt with at length in the various chapters, and to these articles reference must be made. Moreover, the several patts with their component circles have been made the subject of separate articles.

The tahsil extends from the Bhabar Tallades or Tanakpur circle of the Almora district on the east, to the boundary of Bijnor on the west. To the north lie the hill patts of the Naini Tal tahsil, and to the south the Tarai parganas of Kichha and the Kashipur tahsil. It contains one notified area, Haldwani, the headquarters, and the three Act XX towns of Ramnagar, Kaladhungi and Ranibagh-Kathgodam. The population of the Bhabar at the last census, which took place in March, 1901, when all the cultivators from the hills were still in the lowland villages amounted in all to 93 445 persons of whom 53 070 were males and 40,375 females. Like the Tarai, the Bhabar suffered

from deterioration in the early years of the preceding decade, but is now on the road to recovery. In 1891 the number of inhabitants was 100,178. Of the present population, no less than 82,681 are Hindus, 10,399 Musalmans, 196 Christians, 110 Aryas, 54 Sikhs, and five Jains and others. The Hindus are chiefly Brahmans, Khas-Rajputs and Doms from the hills. The remainder consist for the most part of Chamars from the plains, Malis in Chilikia, Darzis, Bantias, Gadariyas and a few miscellaneous castes. The Musalmans are mostly returned as Sheikhs, no other subdivision having as many as 1,000 representatives. The most numerous are Julahas, Banjaras and Telis. The population is mainly agricultural, but there are large numbers of dealers and merchants in the products of the hills and forests at Haldwani and Ramnagar; consequently we find a considerable proportion of the inhabitants engaged in commerce, transport and storage, or general labour. The figures include the Banjara carriers, the Bania grain merchants and contractors, and the Bhotiya traders from Tibet, the census return showing no fewer than 227 sellers of borax. There are, however, no manufactures beyond those required to supply the small local needs.

JASPUR, *Pargana* KASHIPUR.

A town that formerly gave its name to a pargana, which is now merged in that of Kashipur, situated in latitude $29^{\circ} 17'$ north and longitude $78^{\circ} 50'$ east, at a distance of $8\frac{1}{2}$ miles west of Kashipur and $53\frac{1}{2}$ miles from Naini Tal. Jaspur has been constituted a town under Act XX of 1856. In 1900-1901 the income from the house-tax amounted to Rs. 1,408, giving an average incidence of Re. 1-12-0 per assessed house and Re. 0-3-3 per head of population. The total income from all sources, including conservancy tax, sale of stalls in the bazar and miscellaneous revenue, amounted to Rs. 2,096. The expenditure for the same year was Rs. 1,948, being chiefly devoted to the upkeep of the town police and to conservancy. A sum is set aside yearly for improvements, which are especially needed in the direction of lighting and street-paving. The population in 1901 amounted to 6,480 persons, of whom 3,050 were Musal-

There is a small colony of Aryas here, as y as 137

being returned as neither Hindu nor Musalman. These Aryas were originally Gujarati Brahmans, who came here after a famine several generations ago. There has been a slight decrease during the last twenty years, for in 1881 there were as many as 7,055 inhabitants. The town is of comparatively modern growth and possesses but few brick houses. There is a weekly market, which attracts a considerable local trade in cotton goods, timber and sugar. Cotton cloth is manufactured to a large extent by the numerous families of Julahas living in the town and is very largely used by the hill women, who prefer it to all other kinds. Jaspur is more healthy than Kashipur, as there is no tarai belt in the vicinity, and the country round is higher and drier, resembling rather the plains proper. The now extinct pargana of Jaspur was formerly known by the name of Sahajgir; it is one of the settled portions of the Tarai and not under direct management. The tenure is in the main zamindari.

KAILAS, *Patti CHHABHIS DUMOLA, Pargana*
DIIVANIRAU.

A hill with an elevation of 5,886 feet, situated in latitude $29^{\circ} 16'$ north and longitude $79^{\circ} 39'$ east, below Malwa Tal in patti Chhabhis Dumola. From its conical shape it is called Mahadeo-ka-ling and is said to resemble the greater Kailas in Tibet. On this account the whole ridge is considered sacred and it is therefore kept, as far as possible, inviolate, shooting here being forbidden to soldiers and shooting-parties. There is a temple on the summit of some antiquity, but it possesses no special archaeological interest. A large fair is held here in honour of Mahadeo and Jwala Devi, some 5,000 persons assembling for three days towards the end of October.

KALADHUNGI, *Patti CHHAKHATA BHABAR, Tehsil*
HALDWANI.

A small town at the foot of the hills in the Chhakhata Bhabar; it is situated on the high road from Naini Tal to Moradabad at a distance of 16 miles from Naini Tal and 47 miles from Moradabad. in latitude $29^{\circ} 17'$ north and longitude $79^{\circ} 21'$ east, at an elevation of 1,300 feet above the sea. The town is built

at the foot of an enormous talus of a landslip, which extends for three miles up to the village of Dhapla and forms a striking feature in the landscape. Vast quantities of silt are brought down every year in the rains by the Nihal river from the slopes of Ayarpatha, and a certain amount of expenditure is incurred every year in protecting the town from the attacks of this torrent. Kaladhungi is an Act XX town, with a population that has increased from 111 in 1872 to 1,319 at the last census. The income from the house tax in 1900-1901 was Rs. 144-8-9, the total income from all sources being Rs. 1,132-6-8. The chief items are the rent of stalls in the bazar and the slaughter-houses. The expenditure for the same year amounted to Rs. 752, and was mainly devoted to conservancy and police. There is a bungalow here (half of which belongs to the Government Estates and half to the Forest Department), a dispensary, post-office and police-station. From 1850 to 1875 Kaladhungi derived some importance as being a station on the easiest route to Naini Tal, but with the opening of the railway from Bareilly to Kathgodam it has sunk to its original position as a petty Bhabar mart. The road from Moradabad is only metalled to within eight miles east of Kashipur; the remainder is now unmetalled and is almost impracticable for cart traffic in the rains. The road to Naini Tal leads by Mungauli and Khurpa Tal to the pass between the heights of Deopatha and Ayarpatha. Kaladhungi is connected with Haldwani by a good cart track passing along the base of the hills and leading through Chaunchala on the Bhakra, Haripur, Mandapur and Suriya Tal.

KASHIPUR, *Pargana and Tahsil* KASHIPUR.

A municipal town, and the headquarters of a subdivision of the district, situated on the left bank of the Dhela river at a distance of about 45 miles from Naini Tal, in 29° 13' north latitude and 78° 58' east longitude. To the east of the town runs the main road from Ramnagar to Moradabad, which is here crossed by the Tarai road starting from Melaghat on the Sarda and continuing westwards from Kashipur to Jaipur and the Bagnor district. Another road runs south west from Kashipur

to Thakurdwara in Moradabad. The distance to Jaspur is nine miles, to Ramnagar sixteen miles, to Thakurdwara six miles and to Bazpur twelve miles.

Towards the centre of the town there is a fair-sized bazar, consisting chiefly of brick-built houses; elsewhere the buildings are for the most part the ordinary mud and tile huts. The chief building in the place is the residence of the Raja, a large straggling house of no architectural merit. Kashipur is the headquarters of the subdivisional officer, a Deputy Collector on the district staff, who resides here for the greater part of the year. The courts, tahsil, police-station and the large inspection bungalow stand on a piece of rising ground about a mile east of the town. Besides these, there is a post-office, dispensary and a middle vernacular school. Raja Sheoraj Singh began the construction of a garden house for the reception of visitors, but this was never completed and is now partly in ruins. The town consists of seventeen muhallas, known as Pakka-Kot, Katora Tal, Khalsa, Qanungoiyan, Rajwara, Qila, Lahoriyan, Ali Khan Pathan, Thana, Khatriyan, Bansphoran, Katra Maliyan, Sikhan, Rahim Khan Pathan, Bagicha Kashi and Ramtaliya. The whole country at a distance of about two miles to the north of the town is still pure tarai, and this, coupled with the fact that in the rains the back-water of the Dhela blocks up the drainage, renders the place very unhealthy. Towards the close of the rains, when the surrounding swamps commence to dry up, fever and dysentery are very prevalent. These evils are increased by the presence of large excavations throughout the site from which the earth has been dug to construct the mud houses that form the principal portion of the town.

The population of Kashipur at the census of 1872 numbered 13,113 persons; in 1881 it had risen to 14,667, and in 1891 to 14,717. Since that date there has been a considerable decline. At the last census Kashipur contained only 12,023 inhabitants, of whom 6,125 were males. Classified according to religions, there were 6,870 Hindus, 5,306 Musalmans and 47 Aryas, Jains and Christians. There is a small body of influential Khattris residing here, who take all the trade of Jaspur and retail the cloth made there in the hills. There are two market days in

the week, on Tuesdays and Saturdays, with a brisk trade in cotton cloth, iron and brass cooking utensils, pepper and turmeric from Ramnagar and other hill produce. The trade and the importance of the place have declined of late years; but there is some hope of improvement if the projected railway to Ramnagar passes through Kashipur.

The municipality was established in 1872. The board consists of twelve members, of whom the Deputy Commissioner is chairman and the resident Deputy Collector vice-chairman. The statistics of the income and expenditure will be found in the appendix.* The chief source of revenue are the tolls on carts and vehicles, a special tax on circumstances and property, pounds, and the rent of stalls in the market. There are other receipts under several miscellaneous heads, the most important being the income derived from the sale of sweepings. The school is under municipal control. There has been a falling off of late years, owing in part to bad management and also to the deterioration of certain parts of the pargana.

Kashipur is named after its founder, Kashinath Adhikari, a governor of the pargana, who according to one account lived during the reign of Rudra Chand, and according to another was employed by Baz Bahadur Chand; the latter is the more probable. It is said that the site belonged to four villages, in one of which was a noted temple of Ujaini Debi, a much frequented place of pilgrimage in those days. It is doubtful whether this corresponds with the present site of Kashipur, and the tradition inclines to place the first settlement within the precincts of the village of Ujain about a mile to the east—a position which is well raised above the surrounding country. Sheonath Adhikari was governor in 1744, and in the next year Shib Deo Joshi built the fort and gave it first to Hari Ram and then to Siroman Das, and here Shib Deo himself was murdered by the garrison in 1764. Siromani Das was succeeded by his sons, Nand Ram and Har Gobind, whose family retained possession until the British occupation, when Shib Lal, the son of Har Gobind and nephew of Nand Ram, was found as farmer in Kashipur. The family of the Raja first settled here in 1840 when Sheoraj Singh built

the house on a parcel of land granted by the old Pande zamindars.

It is evident, however, that Kashipur was inhabited at a far earlier date. The old site of Ujain is of undoubted antiquity, and was identified by General Cunningham with the Govisana referred to by the Chinese pilgrims. He writes:* "The old fort of Ujain is very peculiar in its form, which may be best compared to the body of a guitar. It is 3,000 feet in length from east to west, and 1,500 feet in breadth, the whole circuit being upwards of 9,000 feet or rather less than two miles. Hiuen Tsiang describes the circuit of Govisana as about 12,000 feet or nearly $2\frac{1}{2}$ miles; but in this measurement he must have included the long mound of ruins on the south side, which is evidently the remains of an ancient suburb. By including this mound as an undoubted part of the old city, the circuit of the ruins is upwards of 11,000 feet, or very nearly that given by Hiuen Tsiang. Numerous groves and tanks and fish ponds still surround the place. Indeed, the trees are particularly luxuriant, owing to the high level of the water which is within five or six feet of the surface. For the same reason the tanks are numerous and always full of water. The largest of these is the Drona-sagar which, as well as the fort, is said to have been constructed by the five Pandu brothers for the use of their teacher, Drona. The tank is only 600 feet square, but it is esteemed very holy, and is much frequented by the pilgrims on their way to the source of the Ganges. Its high banks are covered with Sati monuments of recent date. The walls of the fort are built of large massive bricks, 15 inches by 10 inches by $2\frac{1}{2}$ inches, which are always a certain sign of antiquity. The general height of the walls is 30 feet above the fields, but the whole is now in complete ruin and covered with dense jungle. Shallow ditches still exist on all sides except the east. The interior is very uneven, but the mass has a mean height of about 20 feet above the country. There are two low openings in the ramparts, one to the north-west and the other to the south-west, which now serve as an entrance to the jungle and which people say were the old gates of the fort."

“There are some small temples on the western bank of the Diona-sagar; but the great place of worship is the modern temple of Jwala Devi, 600 feet to the eastward of the fort. This goddess is also called Ujaini Devi and a great fair is held in her honour on the 8th day of the waning moon of Chait. Other smaller temples contain symbols of Mahadeva under the titles of Bhutesar, Mukhtesar, Nagnath and Jageswar. But all these temples are of recent date, the sites of the more ancient fane being marked by mounds of various dimensions from 10 to upwards of 30 feet in height. The most remarkable of these mounds is situated inside the northern wall of the fort above the ramparts. This mound is called Bhima-gaja or Bhim-gada, that is Bhim's club, by which I understand a large lingam of Mahadeva. Were it not for this name I should be inclined to look upon this mound as the remains of a palace, as I succeeded in tracing the walls of what appeared to have been a large room 72 feet in length from north to south by 63 feet in width, the walls being six feet thick. About 500 feet beyond the north-east angle of the fort there is another remarkable mound which is rather more than 32 feet in height. It stands in the midst of a quadrangular terrace, 600 feet in length by 500 feet in breadth, and, as well as I could ascertain from an excavation at the top, it is the remains of a large square temple. Close by the east and within the quadrangle there are the ruins of two small temples. To the eastward of the Jwala Devi temple, there is a curious circular flat-topped mound of earth, 68 feet in diameter, surrounded by a brick wall from 7 to 11 feet in height. It is called Ramgir Gosain-ka-tila, or the mound of Ramgir Gosain, from which I infer it is the burial-place of a modern Gosain. To the south of the fort near the temple of Jageswar there is a third large mound, 22 feet in height, which was once crowned by a temple of 20 feet square inside. The bricks have only recently been removed and the square core of earth still remains perfect. To the westward of this last is a fourth mound on which I traced the ruins of a temple 30 feet square standing in the midst of a raised quadrangle of about 500 feet square. Besides these there are 10 smaller mounds, which make up altogether 14, or just one-half the number of the Brâhmanical temples which are mentioned

by Hiuen Tsiang. The only ruin which appeared to me to be of undoubted Buddhist origin was a solid brick mound 20 feet in height to the south-west of Jageswar Mahadeva and close to the small village of Khagpur. The base of the mound is upwards of 200 feet in diameter. The solid brickwork at the top is still 60 feet thick, but as it is broken all round its original diameter must have been much greater, probably not less than 80 feet. But even this larger dimension is too small for a *stupa* of 200 feet in height of the hemispherical form of Asoka's time. A *stupa* of that early period, even when provided with both plinth and cupola, would not have exceeded 100 feet in height; unless, therefore, we may suppose there is a mistake of 100 feet in the text of Hiuen Tsiang, I feel quite unable to offer any identification whatever of the Buddhist remains of Govisana as described by the Chinese pilgrim."

KASHIPUR *Pargana and Tahsil.*

The pargana of Kashipur forms a separate subdivision of the district and is in the charge of a resident Deputy Collector assisted by a peshkar with headquarters at Kashipur. It occupies the south-west corner, being bounded on the east by Bazpur, on the north by the Chilkia Bhabar, on the west by the Bijnor district, and on the south by Moradabad and the Rampur State, the latter almost enclosing a small portion of the pargana to the south-east, which lies to the east of the river Kosi. Irregular in form, it affords very diverse physical features. In its general appearance it presents a succession of gentle dips and rises, so widely spread as often to be scarcely perceptible except from the variation in the crops, rice in the hollows, and cereals, sugarcane and cotton on the higher and drier plateaux. The northern portion resembles the Tarai, while in the south, beyond a series of wide grass-covered stretches, we find a closer resemblance to the ordinary parganas of the Rohilkhand districts. The extreme southerly part is fairly healthy, while further north the climate deteriorates, being worst in the north-east corner. Here the evil effects of the old system of irrigation are still evident, although the natural features of the country are adverse to a salubrious climate and the remedial measures taken by the

canal authorities cannot have much influence on the general unhealthiness of the tract.

The principal rivers of Kashipur are the Kosi on the east and the Dhela, which runs down the centre, passing to the west of the chief town. These alone have a certain perennial flow, as most of the minor streams, which are very numerous, dry up or shrink to minute dimensions in the hot weather. On the extreme west are the Phika and Peli, smaller streams, but still of sufficient magnitude to influence the country through which they flow. Of the minor streams the chief are the Babilla between the Kosi and the Dhela; the Tumaria, Dandi and Lapkana, intersecting the country between the Dhela and Jaspur. The total area of the pargana is 121,054 acres or 189 square miles. Of this 43,611 acres or 36 per cent. were cultivated in 1902, while of the remainder no less than 67,481 acres or nearly 56 per cent. were classed as culturable waste. A large amount of this, however, consists of forest and jungle. There has, however, been a great falling off of late years, for at the time of Mr. Smeaton's settlement no less than 57,202 acres were cultivated, and even prior to this, in the time of Mr. Money, over 51,000 acres were under the plough. This decline is due to several causes. Kashipur is quite distinct from the rest of the district, and though adjoining the Tarai it does not form part of the Government Estate. It contains 183 villages, of which only fourteen are held in direct management under the Superintendent of the Tarai and Bhabar, the remainder being held in zamindari tenure. A considerable number belong to the estate of the Raja of Kashipur. The fiscal history of the pargana has been dealt with in Chapter IV. At the present time deterioration seems to have set in and the pargana is in a backward state. In 1898 the Deputy Commissioner wrote: "In Jaspur there is a tract of land which has been going from bad to worse from some years past; most of it adjoins sal forest. This deterioration commenced originally in most cases from the exactions of the landlords. Then came a spell of bad harvests when tenants had still to pay their rents instead of getting help from their zamindars. At any time the population is precarious, as it depends on immigration: given a bad season or two and inconsiderate

treatment, the tenants forsake their land and migrate to neighbouring, but more healthy and flourishing, districts. In the case of the villages bordering on the Kilauli sál forests, the cultivating population rapidly diminished by sickness and emigration, while no new immigration filled up the void. The result was that the tree and grass jungle rapidly spread, bringing with it wild animals, fever, and a deteriorated water-supply; so that with these increased evils to deal with the wretched cultivators that remained lost heart and fled." The fact was that there was something approaching in Kashipur a famine in 1897 and also in previous years; but no official notice was taken of the state of things. The results were those of the report; and in 1898 eleven villages were taken into direct management after an annulment of settlement, one was attached for arrears of revenue, and five were taken under the Court of Wards. In 1899 things were no better. Not only had cultivation decreased still further in this tract and with it the population, but a second tract was declared to be affected, consisting of 31 villages between the town of Kashipur and the Kosi. Here, too, the jungle had extended, threatening the cultivation that remained. One cause is the want of irrigation. Many of the small landholders have been ruined and their lands have passed into the hands of money-lenders. Reductions of revenue have been recently made, but in many cases too late to save the proprietors. The approaching settlement of Kashipur will doubtless determine the policy to be adopted in future.

The kharíf is the principal harvest, covering on an average about 31,000 acres, as against some 23,000 acres sown in the rabi. The principal crop is rice in the kharíf, followed by maize and sugarcane with a considerable area under miscellaneous crops. In the rabi wheat largely predominates and is followed at a long distance by gram, barley and lahi.

The history of the pargana is clearly illustrated by the growth or otherwise of the population as recorded at successive enumerations. In 1848 Kashipur contained 55,596 inhabitants. This rose in 1865 to 73,919; in 1872 it had dropped to 71,412, but rose again in 1881 to 74,979 persons. In 1891 when the decline in cultivation was first beginning to set in the pargana

contained 73,168 persons, but at the last census it had fallen to no more than 55,632, or practically the same as in 1848. The pargana is in fact peculiarly sensitive to variations of seasons. Each year brings a greater or less visitation of fever, and after a succession of wet years a decline in the numbers of the people is bound to make itself apparent. Classified according to religions, there were at the last census 34,314 Hindus, 21,107 Musalmans and 211 others, Christians, Jains and Aryas, residing in the town of Kashipur and Jaspur. Of the Hindus the most numerous are Rajputs, chiefly Chauhans, followed by Chamars, Malis, Brahmans, Banias and Ahirs; no other caste has over 1,000 representatives. Of the Musalmans, Sheikhs are most numerous, and are followed by Julahas, Faqirs, Telis, Pathans, Barbais, Chhipis and Dhobis. The greater bulk of the people are engaged in agriculture. The only trade is the cotton weaving of Jaspur and the dyeing and printing carried on there, to which a reference has been made in the article on that town.

Kashipur and Jaspur are the only places of any size or importance in the pargana, and besides these there are only four villages of any size, Dhudawala, Bhubra, Mawakhera and Dabhaura. For the purposes of police administration the pargana is divided between the two circles of Kashipur and Jaspur. Markets are held at Kashipur, Jaspur, Raipur, Mawakhera and Bhubra. Except in Kashipur itself, there are no metalled roads in the pargana. The chief means of communication comprise the main Tarai road from Kichha to Kashipur, Jaspur and Nagina, with branches taking off at Kashipur to Thakurdwara, and at Jaspur to Rehar; and the old main road from Moradabad to Ramnagar, which passes a short distance to the east of Kashipur.

KATHGODAM, *Patti CHHAKHATA BHABAR, Tahsil*
HALDWANI.

This village lies at the foot of the hills and on the right bank of the Gola river, in latitude 29° 16' north and longitude 79° 33' east. Through it passes the main road from Naini Tal to Haldwani and Bareilly, and here is the terminus of the Rohilkhand and Kumaun Railway. It has only become a place of any

importance during the last few years, for formerly the railway stopped at Haldwani. Since the extension of the railway to the very foot of the hills Kathgodam has developed into a small township. It possesses a postal and telegraph office, as well as the railway goods and tonga depôts. There is a police-chauki here for a head constable and four men of the civil police and also for a detachment of the railway police. Adjoining the station there is a rest-house belonging to the railway. The population including that of the railway premises amounted to 375 persons at the last census, of whom 130 were Musalmans and 13 Christians. The numbers fluctuate greatly according to the season. Kathgodam is united with Ranibagh to form a single township for the purposes of Act XX of 1856, but it is at present proposed to convert the two into a single notified area under Chapter XII of Act I of 1900. In 1902 there were 23 houses assessed and the total income was Rs. 745, of which Rs. 240 were derived from the house-tax; the incidence being Rs. 8-9-0 per assessed house and Re. 0-5-9 per head of the population. The expenditure for the same year amounted to Rs. 1,082, of which Rs. 689 were devoted to conservancy, Rs. 127 to the upkeep of the police, and Rs. 144 to local improvements.

KHAIRNA, *Patti DHANIYAKOT, Tahsil NAINI TAL.*

A village on the south bank of the Kosi and on the cart-road from Ranibagh to Ranikhet, which here crosses the river by a bridge. It is chiefly of importance as possessing a dāk bungalow which is much frequented by travellers to Ranikhet; Khairna lies low, and is hot and unhealthy. The village itself is quite insignificant, but with the growth of Ranikhet a small bazār has sprung up here. Besides the dāk bungalow, part of which is reserved as a road inspection-house, there is a camping-ground and a branch post-office. The place stands in latitude 29° 30' north and longitude 79° 29' east.

KHATIMA, *Pargana BILHERI, Tahsil KICHHA.*

This village is the headquarters of the Bilheri pargana and is situated in latitude 28° 55' north and longitude 79° 59' east at a distance of 23 miles from Pilibhit, 8 miles from Mala Ghat

on the Sarda, 15 miles from Tanakpur and 16 miles from Sitar-ganj. It lies at the junction of the main Tarai road and that from Pilibhit to Tanakpur. There is a tahsili here with out-buildings which forms the headquarters of the peshkar, a police-station, dispensary, liquor-shop and post-office. There is also a staging-bungalow for travellers using the road to Tanakpur; it is a good masonry structure of two storeys.

KHURPA TAL, *Patti KOTAH MALLA, Pargana KOTAH.*

A lake and village situated in latitude $29^{\circ} 22'$ north and longitude $79^{\circ} 26'$ east, on the boundary between Kotah Malla and Chhakhata, at an elevation of 5,365 feet. It lies just below the road leading from Naini Tal to Kaladhungi at a distance of about five miles from the former. Here was one of the works of the Kumaun Iron Company, the ruins of which are still standing. Khurpa Tal was formerly a cantonment with barracks for two companies of British infantry, but owing to the unhealthiness of the place, supposed to be due to the fact that the lake has no outlet, it was abandoned in 1891. The land has since been handed over to the Forest Department in 1902, and the buildings are to be removed and their place taken by plantations of deodar and sweet chestnuts. From Khurpa Tal the road leads up to Sariya Tal, where there is a dhobis' ghat and an octroi post of the Naini Tal municipality, past the European and Musalman cemeteries to the Handi Bandi crag and the pass leading into Naini Tal.

KICHHA, *Pargana RUDARPUR, Tahsil KICHHA.*

The headquarters of the tahsil is a village situated in $28^{\circ} 54'$ north latitude and $79^{\circ} 32'$ east longitude, on the main road from Bareilly to Kathgodam, at a distance of 38 miles from the former and 21 miles from Haldwani. The road is here crossed by the main Tarai road, the distance from Sitar-ganj being 14 miles and to Rudarpur eight miles. A small branch road five miles in length leads to Darao, a village on the Bareilly border. Parallel and to the east of the metalled road runs the Rohilkhand and Kumaun Railway, and there is a station here in the village itself. In addition to the tahsil buildings, Kichha contains

a dispensary, post-office, police-station and a cattle-pound. Besides these, there is an Estates bungalow, while four miles off down the Barouilly road there is an inspection bungalow at Satnia belonging to the Rohilkhand Canal division. Kichha lies in well-cultivated open country and has a much more settled aspect than many parts of the Tarai. The population in 1891 was 1,310, and at the last census was only 1,038, of whom 404 were Musalmans. Markets are held here twice a week, on Mondays and Fridays.

KICHHA Tahsil.

The Kichha or Tarai tahsil, as at present constituted, comprises the whole of Tarai proper and includes the parganas of Bazpur, Gadarpur, Rudarpur, Kilpuri, Nanakmata and Bilheri. All these parganas have been described in separate articles; the cultivation, crops, land tenures and fiscal history, as well as the physical characteristics of the tract, have been dealt with in the general account of the district as a whole; and consequently nothing more need be said on these points. The tahsil extends from the Sarda on the east, which separates it from Nepal, to the Kashipur tahsil on the east. To the north lie the different pattis of the Bhabar, and to the south the Pilibhit and Bareilly districts and the territories of His Highness the Nawab of Rampur. The whole tract is in the charge of the Superintendent of the Tarai and Bhabar, who is responsible for the entire revenue arrangements, and is assisted by the tahsildar of Kichha, and his subordinates the peshkars or naib-tahsildars who reside at Bazpur, Gadarpur, Kichha, Sitarganj and Khatima. At each of these places, too, there are police-stations, with outposts at Sultanpur and Khelakhara in the Bazpur circle, at Rudarpur in the Kichha circle, and at Majhauri dependent on the Sitarganj station.

The Tarai possesses no town of any size or importance, and only one village, Sultanpur in Bazpur, with a population of over 2,000 inhabitants. Altogether there are in the Tarai 473 villages, of which 376 are directly managed by Government, 21 are held in zamindari and 61 in *mustajiri* tenure, and five are revenue-free three being in Rudarpur and one each in Kilpuri and Nanakmata. The zamindari villages are chiefly in Nanakmata,

the whole of the old Mainajhundi pargana being so held, while in the northern portion there are 56 *mustajiri* villages, the remaining five being in Bilheri. The total area of the tahsil is 494,433 acres or 772.5 square miles. The population in 1854 numbered 67,187 souls, and in 1865 had increased to 91,802, but this included Mainajhundi for the first time, that pargana having been transferred from Bareilly and amalgamated with Nanakmata after the mutiny. In 1872 the Tarai contained 114,391 inhabitants, and this rose to 132,014 at the following census of 1881, and ten years later to 137,396. This was the highest figure reached, for from 1891 onwards there was a serious decline in the prosperity of the tract, following on the death of Mr. J. C. Macdonald, who had held charge for so many years. At the last census the population had fallen to 118,422 and is now again on the increase. Males numbered 64,920, and females 53,502. Classified by religions, there were 75,825 Hindus, 42,510 Musalmans, and 87 of other religions, Aryas, Sikhs, Jains, and Christians. The Hindus are of very many castes, no less than 36 having over 200 representatives. The most numerous are the Tharus, and following them come Chamars, Bhukasas, Kurmis, Rajputs, Brahmans, Lodhs and Doms. Of the Musalmans, Julahas are found in the largest numbers, and then Sheikhs, Turks, Rains, Faqirs, Pathans and Mewatis, all of whom have more than 2,000 representatives. The people are almost wholly engaged in agriculture or kindred occupations, such as pasture; the other principal employments are cotton-weaving, oil-pressing and general labour. Apart from grain-dealing and trade in agricultural products, there is no commerce beyond what is carried on to supply the simple needs of a poor agricultural population.

KILPURI Pargana, Tahsil KICHHA.

Kilpuri is a pargana of the eastern Tarai lying between Rudarpur on the west and south-west and Nanakmata on the east and south-east; to the north are the patts of Chbakhata and Chaubhainsi Bhabar, while the small southern boundary is formed by the Pilibhit district. It is about twelve miles wide and fourteen miles long from north to south. The pargana now belongs to the Kichha tahsil but formerly gave its name to a

separate tahsil comprising Kilpuri, Nanakmata and Bilheri. The headquarters are at Sitarganj, where the peshkar resides. It contains 44 villages, of which the largest are Sitarganj, Dabhaura Nakaha and Sisaiya. All these villages are held under direct management with the exception of Chaumahla, the revenue-free property of the Mahant at Nanakmata. The population of the pargana is of a fluctuating character, for the tract is one of the most unhealthy parts of the Tarai. The Tharus, however, are found here in considerable numbers, and their presence is especially desirable as they are practically proof against the climate. In 1891 the total population was 12,447 persons. At the last census it had fallen to 11,018, of whom 6,073 were males. Musalmans numbered 4,174 souls, and are chiefly found in Sisaiya, Nakaha and a few other villages in the south.

The pargana consists very largely of forest, which stretches further south here than in any other portion of the Tarai. The chief jungles are known as Kotkhara and the Barkoli fuel and fodder reserve, which stretches down the centre almost to the southern boundary. The chief rivers of the pargana are the Gola or Kichha river in the west, the Sukhi, which to the south is known as the Bahgul, and the Kailas, which flows along the eastern boundary. The pargana is well provided with roads. It is traversed by the main Tarai road from Melaghat to Sitarganj which crosses the Kailas by a ford; from Sitarganj two branches lead westwards to Kichha, one going direct through the forest and the other turning to the southwards through the cultivated portion by Nakaha and Sisaiya, but on both roads the Bahgul is unbridged. To the south is the road to Pilibhit, and that to Majhauri in the Bilheri pargana where it joins the main road from Pilibhit to Barmdeo. The latter has to cross three large unbridged rivers, the Kailas, the Deoha, and Lohia, and during the rains is only used as far as Bijti in the Nanakmata pargana. To the north are two roads, one giving unbroken communication with Chorgallia in the Bhabar, and the other connecting Sitarganj with Haldwani; but as the Bahgul has to be crossed once, the Sukhi twice, and the Gola once, before Haldwani is reached, the latter road is of no service in the rains except in so far as it provides communication with Sitarganj for the Tharus of the

north of the pargana. The only market town is Sitarganj, where there is a canal bungalow, an encamping-ground and a post-office. There are liquor shops at Sitarganj, Sisauna, Bhuria and Lalha.

The cultivated area of the pargana is small, owing to the large proportion of forest and jungle. The total area is 80,667 acres or 126 square miles, and of this only 13,675 acres or 17 per cent. were assessed in 1902, the rents collected being Rs. 24,867. The kharif is the most important harvest, covering some 11,000 acres, of which half is irrigated, while the average rabi area is under 9,000 acres. In the kharif the pargana is one huge rice plain and very little else is sown in the southern villages. The cultivated portion of the pargana may be divided into three main tracts; the first of these comprises the Tharu villages between the Bahgul and Katna rivers in the north-west, all of which are irrigated by the Katna Canal. The second tract contains the Tharu villages in the north between the Bahgul and the Kailas; while the third includes the other villages of the pargana which are cultivated by plainsmen and are irrigated from the Bahgul canal and its branches. For the irrigation system of the pargana reference should be made to the general account in Chapter II. The rates for the Tharu villages in Kilpuri are lower than in Bilheri, although the majority are irrigated, while the Bilheri villages do not as a rule enjoy this advantage. The reason is that Bilheri has been completely cleared of jungle, excluding the large forests of Surai and Banbasa, and the villages lie in open plains, well removed from high grass and not subject to damage from wild animals; the Kilpuri Tharu villages, on the other hand, are in and around the jungle and have large areas of high grass and scrub scattered all over them, which makes the cultivation much more precarious. On the whole, the pargana may be said to have escaped the decrease in rents which took place in the western Tarai, for the average collection of rents for the ten years ending 1902 has been nearly Rs. 21,000 and during the past five years there has been an almost constant increase.

KOSYAN MALLA *Patti*, Pargana DHANIYAKOT.

This patti is a continuation of Chauthan, but lies on a lower level. It consists of a long narrow strip of land lying along the

right or north bank of the Kosi river from the summit of the watershed to the river bank, along which the road from Ranikhet runs to Ramnagar and the Bhabar. The patti contains seven villages, of which the most important are Barmdeo, Dhari, and the two Bardans; the latter, however, have suffered considerably from diluvion. There is a large amount of riparian and irrigated land, but the Kosi flood of 1880 did more damage here than elsewhere, and the consequent reduction of nearly 30 per cent. of the revenue gives some idea of the extent of the mischief. As it is, the patti is the least prosperous of those that lie in the Kosi basin, but the inhabitants are nevertheless well-to-do. A good deal of the land is held by a rich Almora Brahman.

Kosyan Malla is bounded on the west by Chauthan, and on the south by Simalkha and Uchakot. To the north and east lies Dhuraphat of the Almora district. In former times, prior to the constitution of the Naini Tal district, it formed a portion of pargana Phaldakot. The revenue in 1815 amounted to Rs. 336, and rose by slow gradations to Rs. 378 in 1820 and Rs. 459 in 1843. In 1870 the assessment was Rs. 875, but this was reduced to Rs. 618 after the floods of 1880. It now stands at Rs. 836, with an incidence per soil unit or *bisi* of 2nd class *uparawn* land of Re. 0-13-10. The population in 1901 amounted to 968 at the regular census and to 1,442 in the previous October.

KOSYAN TALLA *Patti*,

Pargana DHANIYAKOT.

This patti also formed part of the Phaldakot pargana, but on the constitution of the Naini Tal district in 1890 it was transferred to Dhaniyakot. It is a small riparian tract lying on both sides of the Kosi, which runs nearly due west through the patti from Punt-pipal by Amel, Seti, where the Almora and Ranikhet roads to Ramnagar unite, and Bishmoli to Ukhal-dunga in Kotah Talla. The patti is bounded on the east by Chauthan, which with Malla Kaklasaun of Almora forms the northern boundary. To the west lie Kotah Talla and Talla Salt, and to the south Kotah Talla. The bulk of the valuable cultivation lies on the right bank of the river, and some of the lowlying land is

perhaps the best in the district, notably in Amel and Seti, were there are broad stretches of rich riparian land. Some damage was done by the flood of 1880, but a good deal of the land so injured has been since reclaimed, although large tracts of boulders and pebbles are to be seen between the fields. The chief inhabitants of the patti are the Belwals, who form a very wealthy family, and own a large area of land in the Bhabar. The products of the patti are grain, chillies, and ghí, which is sold by the inhabitants of the villages on the left bank of the river, particularly Halron, there being ample grazing-ground on the slopes of Binaikdhura. The revenue of the patti at the conquest was Rs. 449, rising to Rs. 666 in 1820, and falling again to Rs. 650 in 1843. In 1870 the jama was fixed at Rs. 1,410 in 1870. In 1880 there was a reduction of Rs. 377 on account of diluvion, but the recovery has been sufficient to warrant an increased demand of Rs. 1,556 at the recent settlement. The incidence per soil unit is now Re. 0-14-10. The population in 1901 numbered 1,470 at the regular census.

KOTAH, *Patti* KOTAH BHABAR,
Tahsil HALDWANI.

The small village of Kotah, with its ruined fort and the adjacent hamlet of Debipura, occupies the mouth of the Dabka pass, where the river enters the central plain of the Kotah Dún. It is now a place of little importance, although it frequently figures in the history of the district during the days of the Chand Rajas and the Gurkha rule. It lies in latitude 29° 22' north and longitude 79° 18' east, at a distance of twelve miles from Ramnagar and nine miles from both Kaladhungi and Belparao. There is an Estates bungalow here. Madden writes: "Kotah is a miserable place about three miles above Ukali, on the opposite bank of the river, where it emerges from Pahar Kotah by a most magnificent gorge. The course of the stream is here diverted by a bluff, on which are the remains of the old fort, defended by thick stone walls, wooded precipices and cut off from the cultivated grounds to the south-west by a narrow, but deep, ditch. The position is very unhealthy and the Gurkhali garrison had to retire to Dola a fortified position on a peak to the north west.

On the same bank, but lower down, is the romantic temple of Debipura, about 200 feet above the river on a low range of wooded hills."* Kotah is on the road from Dechauri to Ramnagar. The population in 1901 numbered 231 souls, almost all of whom are Khasiyas.

KOTAH Pargana, Tahsil NAINI TAL.

This is the westernmost of the hill parganas, and comprises the two pattis of Kotah Malla and Kotah Talla, each of which has been separately described. In former days it included the whole of the tract now known as the Kotah Bhabar, but the two have been quite distinct since the formation of the Government Estates. The pargana now lies wholly in the hills, and is generally known by contradistinction as Pahar Kotah; it is bounded by the pattis of Kosyan Talla, Uchakot and Simalkha of pargana Dhaniyakot, extending in the extreme north-west to the Kosi which separates the pargana from the Almora district; on the west and south by the Kotah Bhabar; on the south-east by the Chhakhata Bhabar, and on the east by the hill pattis of Chhakhata and Dhaniyakot. The pargana contains the western heights of the Gagar range overlooking the Kotah Dún. Badhandhura due north of Kotah village has an elevation of 8,408 feet, and between it and China over Naini Tal are three peaks with a height of over 8,000 feet each, the loftiest being Badhan-tola. To the west the ridge is continued in Saonchalia, rising to 8,504 feet, whose spurs run down to the Kosi. The sources of the Dabka, Baur, Nihal, Bahmani and Bhakra rivers are all situate in this pargana. The lower and upper villages resemble those of Chhakhata, but there is in Kotah no central level tract like the valley of Bhim Tal. The best and largest estates are situated between the heads of the Dabka and Bahmani rivers on the spurs of Badhandhura. There is also a cluster of good clearings at the head of the Baur between Binaik-dhura and China.

The population of the pargana at the last census numbered 4,788 persons, of whom 2,712 were males. They are almost all Hindus, chiefly Khasiyas and Brahmans- Musalmans numbering

only 23 in all. There is no village of any size or importance in the pargana. At the preliminary enumeration of October, 1900, the total population was 5,929, the difference being far greater in the case of Kotah Malla, the inhabitants of which cultivate large areas of the Kotah Dún. The revenue of the pargana now stands at Rs. 3,985, including the potato fields of Kotah Talla. The Malla patti constitutes a single patwari's circle, while Kotah Talla is united with Kosyan Malla of Dhaniyakot. The eastern half of the pargana is well supplied with roads. Through it passes the main line from Naini Tal to Kaladhungi and Moradabad, from which a branch takes off below Khurpa Tal (*q.v.*) and leads to Dechauri and Ramnagar. From Dechauri another road goes north-east to Pangot and Ratighat. Besides these there are several forest roads of considerable value as affording communication between the various villages. The western patti, however, is not so fortunately situated. It is only traversed in the extreme north-west by the road from Dhikuli to Betalghat and Khairna.

KOTAH BHABAR, *Tahsil* HALDWANI.

This large subdivision of the Bhabar extends from the Bhakra river on the east, which separates it from the Chhakhata Bhabar, to the boundaries of the district on the west. To the north it is bounded by the hill pargana of Kotah and by the Almora district, and on the south by the Tarai parganas of Gadarpur and Bazpur. At the south-eastern extremity it extends very far into the plains, but further westwards it narrows considerably below Nayagaon and Kamola till it reaches the Gaibua circle of Chilkia. The principal rivers of this portion of the Bhabar are the Kosi on the west, the Dabka, the Baur and the Bhakra. Kotah Bhabar is fairly well supplied with roads. It is traversed from east to west by the submontane road from Haldwani to Kaladhungi and Ramnagar, which is crossed at Kaladhungi by the main road from Naini Tal to Moradabad. From Ramnagar the cart-road leads northwards to Ranikhet, with a branch leading north-east from Dhikuli to Betalghat and Khairna; while southwards from Ramnagar runs the road from Kashipur to Moradabad. Another road is that from Ramnagar to Kotah

Dechauri and Naini Tal. The physical aspects of the Kotah Bhabar are extremely diverse. It comprises five circles known as Kaladhungi, Kamola-Dhamola, Belpokhra, the Kotah Dun and the Patkot Dun. The whole is in the charge of the peshkar of Ramnagar, with the exception of the Kaladhungi circle. It contains two Act XX towns, Ramnagar and Kaladhungi, at both of which markets are held, as also at Belparao and Aonlakot. At Sitabani in the Kotah Dun a fair is held annually in the second week of January.

Beginning from the east there is the Kaladhungi circle lying between the Bhakra, from which, however, it is separated by a belt of forest and the Baur river. There are two patwari circles supervised by a *naib-peshkar* with headquarters at Kaladhungi and 32 villages, of which six are zamindari, three *mustajiri* and 23 under direct management. Most of the cultivation lies south of the submontane road, and to the north there is only the village of Dhapla on the high bank of the Nihal river. Immediately below this village is the enormous talus of a landslide which is constantly widening and spreading forward towards the block of cultivation which lies beyond. The southern villages are irrigated by a masonry canal taking out of the Baur river at Kaladhungi.

The Kamola-Dhamola circle lies between the Baur and a local torrent known as the Ladhuagarh. It consists of only twelve villages, of which three are *mustajiri* and the rest managed directly. The soil is excellent, but cultivation is exposed to the ravages of wild animals and damaged by cattle grazing in the lower lands. It has ample means of irrigation, there being no less than three canals. On the Nayagaon side water is run out from the stream called the Dhunigarh, while the Kamola and Dhamola sections are irrigated from two canals both taken out of the Karrar.

The Belpokhra circle extends from the Ladhuagarh to the Chilkia boundary. It is a somewhat poor tract, very unhealthy, and with a less certain water-supply. It contains 22 villages, of which Belparao and Bundarpura are zamindari, three are *mustajiri* and the rest directly managed. It is irrigated on the

east by the Dhamola canal, in the centre by the Pawalgarh, and on the west by the Kicheri.

The next portion is the Kotah Dún, a beautiful tract of country which is separated from the lower Bhabar by a small range of hills covered with sál forest, and lies between the Baur on the east and the Dabka on the west. Of all the Bhabar circles this is most favourably situated and the most picturesque. The cultivated portion is some eight miles in length and four miles in breadth, dotted with mango groves, and emulating the Dehra Dún both in appearance and quality. It is considerably higher than the rest of the Bhabar, being at an average elevation of 1,800 feet, and the climate is fairly healthy. The tract is divided into two equal halves by the Karrar, a hill stream. Irrigation is effected on the east by the Dechauri and Patalia canals from the Baur river, and on the west by the Kotah canals taking out of the Dabka. These amply supply the whole cultivated area, which has reached its fullest limit. The Kotah Dún contains fifteen villages held in zamindari tenure, one *mustajiri* and twelve directly managed. They pay a rate ranging from eight annas to ten annas, with the exception of two poor villages in the extreme west. The inhabitants are all hillmen and are generally prosperous, but they do not attempt to grow anything more valuable than wheat, barley, rice and the coarser grains.

The remaining portion of the Kotah Bhabar consists of a small block of scattered villages in the north of the patti that goes by the name of the Patkot Dún. It contains only fifteen villages of which six are zamindari, two *mustajiri* and seven managed directly. Patkot, Dhikuli, Bhalon and Amrai are practically hill villages, as they stand on a great slope, and the fields are small and terraced. All of these villages except Dhikuli, which possesses a small canal taken out of the Ke-i, arrange for their own water-supply. They are mostly in a backward condition and pay low rentals, Dhikuli alone reaching the rate of ten annas a *bigha*.

The total population of the Kotah Bhabar at the last census numbered 30,770 persons. The great majority are Hindus from the hills. Musalmans numbered 3,485, but they were almost wholly confined to the towns of Ramnagar and Kaladhungi and to

the village of Dhikuli. In the hot weather half of the population disappears, as the hillmen, who are almost all Khasiyas, return to their homes in the highlands of Naini Tal and Almora.

KOTAH MALLA *Patti*, *Pargana* KOTAH.

This patti is of fair size and contains 37 villages, lying in the valleys of the Baur and Nihal rivers, which rise in the heights near Naini Tal, the Nihal having its source on Ayarpatha and the Baur coming down the glen between Binaikdhura and the north-western spurs of China. The patti extends from the Kotah Bhabar on the south to Uchakot and Dhaniyakot on the north. To the east lies Chhakhata, and to the west Kotah Talla. There is a very large area under forest, which is reserved and under the control of the Department, and belongs to the Naini Tal and Kumaun divisions. Many of the villages are demarcated—a fact which would militate against their prosperity were it not for the proximity of Naini Tal, which affords a constant source of wealth to the villagers, who readily obtain easy employment in the station and also derive large profits from the sale of milk, ghí, vegetables and potatoes, which are very largely grown throughout the patti. Communications are excellent, the main roads being those from Dechauri to Pangot and Ramgarh, which is connected with Naini Tal by a forest road over China to Pangot, the road from Naini Tal to Dechauri crossing the watershed of the two rivers, and the road from Naini Tal to Kaladhungi *via* Khurpa Tal. Some of the lower villages adjoining the Bhabar suffer from a poor soil and a bad climate, but generally speaking the patti is the most prosperous and wealthy in the district. The soil is good, and while the people own large estates in the Bhabar, the proximity enables them to raise two harvests in the year in their hill homes simultaneously with the Bhabar cultivation. The largest villages are Kurpakha, Bangar, Muhrorha, Syat and Bohragaon. There has been a large extension of cultivation since 1870, but the forest demarcation has checked any further great increase. Population has also risen considerably, a sure sign of prosperity. In 1901 the total was 2,293 at the regular census, but at the preliminary enumeration of October, 1900 before the exodus

to the Bhabar, it was 3,379: of these 1,916 were males and 1,463 females. The land revenue of the patti in 1815 was Rs. 1,153, but this was reduced to Rs. 823 in 1820. In 1843 it rose again to Rs. 921 and to Rs. 1,223 in 1870. It now stands at Rs. 1,931 with an average incidence of Re. 1-0-10 per *bisi* of 2nd class *uparawn* land, the soil unit of the settlement. The patwari resides at Banjbagr, where there is a school.

KOTAH TALLA Patti, Pargana KOTAH.

This patti consists of 36 villages situated on the southern slopes of the Binaik-dhura ridge and a narrow strip of lowlying hills in the bend of the Kosi, at the north-western extremity of the district. It is bounded on the south and west by the Bhabar tract of the same name and on the north by Simalkha, Uchakot and Kosyan Talla, while to the east lies Kotah Malla. The climate and configuration of the patti varies very greatly: from the high range containing the mountains of Binaik-dhura, Saonchalia, Badhan-tola and Badhan-dhura, all over 8,000 feet, to the low lying villages of Amgaddi and Gauriyadeo, situated in the midst of *sál* forest, with a climate like that of the Bhabar. The people are extremely well off, as they all cultivate land in the Bhabar as well as in the hills, where they reap large profits from the potato cultivation on the slopes of Binaik-dhura, where there are three large Government mahals, under direct management, and assessed separately at the rate of Rs. 2 per acre. These mahals are known as Sigari, Ghuggu and Bansi, and pay a revenue of Rs. 2,757. The higher villages in the Dabka valley also grow potatoes largely, and besides own a large proportion of the land in the Kotah Dun. They are rich in cattle and carry on a large trade in *ghí*. Many of the upper villages are deserted by their inhabitants for the greater part of the year, and the land is cultivated by *sirtáns* from Salt and elsewhere in the Almora district. The lowlying villages have a fertile soil and ample means of irrigation. The road from Ramnagar to Almora runs through the patti, passing by Ukhaldhunga in the north. The principal villages are Bhagni, Dauna, Saurh and Amgaddi. The total population in 1901 was 2,495 at the regular census and 2,550 in the previous October

Of the former 1,295 were males as against 1,200 females. All but four were Hindus. The revenue of the patti in 1815 was Rs. 916 rising to Rs. 1,008 in 1820 and Rs. 1,223 in 1843. In 1870 the demand was raised to Rs. 1,676. Since then the potato mahals have been added and the revenue of the remainder of the patti now stands at Rs. 2,054.

KUTAULI *Pargana*, *Tahsil* NAINI TAL.

This is a small hill pargana in the north-east of the district between Dhaniyakot on the west and Mahruri on the east. It forms part of the valley of the Kosi, extending southwards from that river to pargana Ramgarh, the southern boundary being the crest of the western continuation of the Mukhtesar ridge which slopes down to Khairna. The pargana contains four small pattis, Kuttauli Malla and Talla, and Bisaud Bichhla and Talla. The two last were added to Kuttauli on the formation of the Naini Tal district in 1891. Each of these pattis has been separately described, and reference should be made to the several articles. The pargana contains 76 villages, of which 40 are in Kuttauli: none of them are of any size or importance. The total population at the regular census of 1901 was 2,200 souls, chiefly Khasiyas and Brahmans. At the preliminary enumeration, however, in the preceding October there were no less than 7,409 inhabitants, from which it will be seen that the great majority of the people emigrate to the Bhabar during the winter months, although a large number is also employed in the carrying trade between Almora and the plains. Communications are fairly good, for not only is there the main road from Almora to Peora and Ramgarh in the eastern half, but also in the north along the Kosi runs the road from the Sual bridge to Khairna. The revenues of the two pattis of Kuttauli are entirely assigned to the temples of Badrinath and Kedarnath in Garhwāl and are administered as part of the Sadabart fund. The revenue payable to Government is consequently very small, amounting in all to Rs. 1,299 for the two Bisauds alone; and in Bisaud Bichhla, too, the revenue of one village Kalsim, is assigned in *gunth* to the temple of Kapileswar in Almora.

KUTALI MALLI Patti, Pargana KUTALI.

This patti occupies the lower spurs of the Mukhtesar ridge running down to the Sual river, which divides this district from Almora. The eastern boundary is the Kumniya stream which joins the Sual just above the Garari bridge on the road from Naini Tal to Almora. To the west lies Kntauli Talli and to the south Ramgarh Talla. In the centre of the patti lies the small patti of Bisaul Bichhla, a similar tract consisting of ten villages, the lands of which are entirely surrounded by this patti. The road from Almora to Naini Tal runs through the centre of the patti, with a dāk bungalow at Peora. The villages are generally at a low altitude, the higher slopes being covered with a thick forest of oaks and rhododendron. Below this there is a large expanse of valuable chīr forest, which supplies a great deal of the timber and wood for the Almora market. The people are in very prosperous circumstances; they reside in the hill villages all the year round, and only a few cultivate in the Bhabar; but they employ their time in the cold weather in carrying grain between Almora and the submontane markets, and own a great number of ponies. They also are rich in cattle and carry on a considerable trade with Almora in milk and ghī. The standard of cultivation is very high and land is valuable. The population has increased very considerably of late years, which is a very favourable sign. At the census of 1901 the total was 697 at the regular census, and 1,785 at the preliminary enumeration of October, 1900, when all the people were in their hill homes—a difference that gives some idea of the importance of the carrying trade in this patti. The largest villages are Mauna and Dhari.

The revenue of the patti now stands at Rs. 1,377, being at the rate of Rs. 1-4-4 per acre. In 1815 the revenue was Rs. 378, rising to Rs. 520 in 1843 and to Rs. 838 in 1870. The whole of this revenue, however, is assigned in perpetuity to the temples of Badrinath and Kedarnath in Garhwāl, the entire patti being held in *gunth*. The patwari resides in Mauna, where there is a school.

KUTALI TALLI Patti, Pargana KUTALI.

A small patti lying along the left bank of the Kosi below the confluence of this river with the Sual as far as Khairia



on the east. The land ascends from the river with a moderate slope to the high oak-clad ridge of Hartola on the south, which forms the water parting of the Kosi and Ramgarh river valleys. It is bounded on the east by Kutauli Malli and on the west by Dhaniyakot, which, with Agar and Ramgarh Malla, also forms the boundary on the south. The soil is particularly fertile, especially in the villages just above the Kosi, such as Jaurasi, Chheori, Gangarkot and others. There are several excellent villages in the glen, known as the Kartuyagarh, which runs down from the Deodar dharmasala to the Kosi. The climate is admirable, there are ample facilities for irrigation, and no dearth of timber or grazing on the high ridges towards Ramgarh. The road from Almora to Naini Tal *via* Khairna passes through the patti, and the upper road which leads through Ramgarh and Peora is within easy reach. The villages are large and populous and lie in open country which has been cleared of forest. The people find a ready market for their grain either in Almora or Naini Tal, and there are numerous shops along the Khairna road between Kakrighat and the Garari bridge. They also possess large numbers of ponies, on which they transport grain from the Bhabar to the Almora market. Cattle, too, are numerous, and ghi forms a considerable item in their income. In addition to this they own large estates in the Bhabar, the villagers of Banj, a village below Peora, owning land in the vicinity of Haldwani, while the people in the Kosi valley possess other land on the Ramnagar side. Most of the people spend about seven months of the year in the Bhabar. The revenue of the patti now stands at Rs. 2,445, being at the rate of Re. 0-14-4 per *bisi* of *uparaun* land, the soil unit of the settlement. In 1815 the land-tax yielded Rs. 863, rising to Rs. 1,046 in 1843, and to Rs. 1,602 at Mr. Beckett's settlement of 1870. As in Kutauli Malli, the whole of this is assigned to the Sadabart fund, the patti being the *gunth* of the great Garhwál temples of Badrinath and Kedarnath. The population in 1901 numbered 986 at the regular census of March; but in October, 1900, before the exodus to the Bhabar, the total was 3,563, showing what an important factor the Bhabar cultivation is in the prosperity of the patti. Males numbered 1,801 as against 1,762 females.

LALKUA, *Patti* CHHAKHATA BHABAR, *Tahsil* HALDWANI.

A small village with a camping-ground and a cattle station on the main road from Kathgodam to Bareilly, about half way between Haldwani and Kichha, in latitude $29^{\circ} 4'$ north and longitude $79^{\circ} 32'$ east. It only deserves notice as possessing a station on the Rohilkhand and Kumaun Railway. The village is situated in the extreme south of the Bhabar and close to the Tarai boundary in the midst of grass jungle and forest. It had a population of only 106 persons at the last census, chiefly graziers from the hills and Banjara carriers.

MAHRURI *Pargana*, *Tahsil* NAINI TAL.

This pargana lies wholly in the hills and forms part of the peshkari of Naini Tal. It is bounded on the north by the pattis of Kutauli Malli in pargana Kutauli and by Uchyr and Bisaud Malla of the Almora district; on the west by pargana Ramgarh; on the south by Chhakhata; and on the east by the parganas of Dhyaniarau of this district and Chaugarkha of Almora. It contains the three pattis of Mahruri Malli, Mahruri Bichhli and Mahruri Talli, each of which will be separately mentioned, and reference must be made to the following articles for the general description of the tract. At the constitution of the district in 1891 the pargana was remodelled, and the fourth patti of Mahruri Dolphat was taken away and given to the Chaugarkha pargana of Almora. At the last settlement the total revenue of the pargana was fixed at Rs. 3,911, this being the final demand which will come into force in 1902. The actual sum payable to Government, however, is only Rs. 12, as the whole of the revenues of the Bichhli and Malli pattis are assigned in *gunth* to the temples of Badrinath and Kedarnath in Garhwál, as also is almost the whole of Mahruri Talli. The population of the pargana at the 1901 census was 1,991 persons, but at that time a very large proportion of the inhabitants was still in the Bhabar, whither they migrate during the cold weather; for the preliminary enumeration of the previous October gave a total of 4,863 souls. The pargana is fairly well supplied with means of communication; in the north-west corner is Peora, a dak bungalow on the main road from

Ranibagh to Almora, while from this place a branch road leads to Mukhtesar along the borders of Mahruri Bichhli, and thence through Agar to Dhari in Mahruri Talli, another dak bungalow on the road from Bhim Tal to Mornaula in the Almora district. From Mukhtesar a second branch road leads to Nathua Khan on the Ramgarh-Peora road. Separate articles will be found on Mukhtesar and Peora.

MAHRURI BICHHLI *Patti*, *Pargana* MAHRURI.

A fair-sized patti in the north-eastern corner of the district, between Chaubhainsi on the south and Kutauli Malli and Uchyur of Almora on the north. To the east lies Mahruri Malli, and to the west Kutauli Talli and Agar. It contains 19 small villages, and the patwari resides in Gahnah; there is a school at Satauli near the Peora bungalow. The patti lies on the slopes that extend southwards from the Kumniya Garh to the heights of Mukhtesar, on the eastern side of the road from Peora to Almora. There are 19 villages in the patti, of which Gahnah is the largest. The population numbered but 567 persons at the last census, but a large proportion of the inhabitants were then absent in the Bhabar or employed on the carrying trade on the roads from Almora to the submontane markets. At the preliminary enumeration of October, 1900, the total was 2,127 persons. The revenue at the conquest amounted to Rs. 367, rising to Rs. 594 in 1843 and Rs. 953 at the 1870 settlement. The final demand of the present revision is Rs. 1,697, which it will reach in 1912. The whole of this is assigned in *gunth*, as stated in the preceding article.

MAHRURI MALLI *Patti*, *Pargana* MAHRURI.

This is a small patti on the eastern borders of the district adjoining Dolphat of Almora. To the north lies Bisaud Malla, to the west Mahruri Bichhli, which with Dolphat also forms the boundary to the south. Its boundaries were greatly contracted on the formation of the Naini Tal district and it now contains only the village of Mukhtesar and two small hamlets. It stands high, being drained on the north by the Kumniya Garh, which separates the two districts. To the south there is a ravine which feeds the same tributary of the Kosi. The population migrates

to the Bhabar for the most part, but a number of the inhabitants find constant employment in and about the Bacteriological Laboratory. At the census of March, 1901, the total was only 318 souls, of whom 61 were Musalmans and eight Christians. The total at the preliminary enumeration of the preceding October was 437. The patti forms a single patwari circle with Mahruri Bichhli. The revenue demand is progressive, rising from Rs. 158 to Rs. 178, the latter figure coming into force on July 1st, 1912. The whole revenue of this patti is assigned in *gunth* to the Garhwāl temples, as is the case with Mahruri Bichhli. Means of communication are provided in the roads leading from Mukhtesar to Peora and Dhari.

MAHRURI TALLI Patti, Pargana MAHRURI.

A small patti that occupies the high land between the high ridge of Deothal, an off-shoot of the Chaubhainsi range and the equally lofty heights of the Gagar mountains above Ramgarh. The whole surface of the patti stands high, as there are no deep valleys or river beds and the elevation ranges from over 4,000 feet to above 8,000 feet at the two extremities. It is bounded on the north by Agar and Ramgarh Malla; on the west by Dhaniyakot; on the east by Chaubhainsi and Chhabbis Dumola; and on the south by the lake country of Chhakhata. The western half of the patti is now reserved forest, and consequently extensions of cultivation have been checked, and the villages, such as Kun and Kunj, are mere demarcated *chaks*, in which both cultivation and population must remain practically stationary. In the east, however, vast areas of fine oak forest have been cleared for potato cultivation, and the area under cultivation has almost trebled. The people are very well off and the standard of comfort is high; but their prosperity is chiefly due, with the exception of the potato fields of Sarna, to their large estates in the Bhabar. Practically the whole population migrates in the cold weather to the neighbourhood of Haldwani, and across the Gola, where they hold very large estates, paying over Rs. 4,000 in revenue there. They are very rich in cattle, the incidence being as many as 11 per plough. The potato fields were assessed in 1896 at the rate of Rs 2 per acre. They are very largely held

by sirtāns from the Almora district, who pay very little more than the revenue to the proprietors. These tracts are now included in the general assessable area of the patti, and the total revenue now stands at Rs. 2,036, with an incidence of Re. 1-5-0 per *bisā* of second class *uparāun* land. In 1815 the land-tax yielded Rs. 327, rising to Rs. 523 in 1843 and Rs. 840 in 1870. The population has considerably increased of late years, and in 1901 numbered 1,106 at the regular census; but a more accurate figure is 2,299, the result of the preliminary census in October, 1899, taken before the exodus to the Bhabar. Of these 1,225 were males and 1,074 females.

The patwari resides in Gargaon of Patti Agar, which is joined with Mahruri Talli to form a single circle. The largest villages are Shyamkhet, Sarna and Sashani.

MALLI RAU *Patti, Pargana DHYANIRAU.*

This patti occupies the north-eastern extremity of the district, and lies on either bank of the Ladhiya, from Joshiyura, where it leaves the high range of Mornaula and follows its own deep channel, to Kairagaon, where the river flows into Talli Rau of the Almora district. The Kali Kumaun pargana of the latter district forms the boundary on the north and east, and for a short distance on the south. The remainder of the southern boundary consists of Chaugarh, which with Bisjyula and Chaubhainsi closes in on the west. The patti is divided naturally into two parts: the upland villages of poor soil towards the Chalsi and Asi pattis of Kali Kumaun, and the rich lowlying riparian tract, with ample means of irrigation in the bed of the Ladhiya, or on its right bank. This land forms one of the most fertile tracts in the district, and the prosperity of the patti is only hampered by its remoteness and the absence of roads. The majority of the people do not migrate to the Bhabar, and very little land is owned there by the people of Malli Rau. The standard of cultivation is consequently higher than in the adjacent pattis. There is still a large area of forest and ample room for extension of cultivation. Chillies and turmeric are largely grown, and also rice of the best quality known as 'bānsmati'. The people are well off and enjoy the advantages of a good soil and climate.

From the patti of Rau the patti of Bisjyula and Chhabbis Dumola were formed at the settlement of 1870, and the remainder was divided into Malli and Talli Rau. Talli Rau was assigned to Almora on the division of the districts in 1870.

The assessable area of the patti now amounts to 2,980 *bisis*, showing an increase of nearly 38 per cent. since 1870. The revenue at the conquest was Rs. 648, rising to Rs. 1,101 in 1820 and Rs. 1,175 in 1843. There was a further rise in 1870, when the demand was fixed at Rs. 1,804, and a still larger enhancement at the recent settlement, the jama being Rs. 2,704 with an incidence of Re. 0-13-9 per soil unit or *bisi* of second class *uparaun* land. The whole revenue of two villages, Gurana and Baret, and part of that of Joshiyura is assigned in *gunth* to the temple of Barahi in Almora. The population in 1901 numbered 882 at the regular census and 3,004 at the preliminary enumeration of October, 1900, when all the people were in their homes. The chief castes are Boras and Kairas, who give their names to Borarau and Kairarau in Almora, whither they emigrated from this patti.

MALWA TAL, *Patti* CHHABBIS DUMOLA,
Pargana DHYANIRAU.

A large lake lying in 29° 20' north latitude and 79° 39' east longitude, on the eastern borders of the patti and adjoining Chhakhata, at a distance of nine miles from Bhim Tal and 21 miles from Naini Tal, at an elevation of 2,300 feet above the sea. From Bhim Tal the road ascends the ridge to the north of the valley, and passing along the crest for a few miles makes a sudden and very steep descent to the lake. Malwa Tal is of a very irregular shape, being 4,480 feet long in the centre and 833 feet wide at the broadest part; it has an area of 121·76 acres, and a maximum depth of 128 feet. It lies at the base of two ranges of hills, and follows their outline, stretching north-west and south-east. The mountains around are lofty and spring up directly from the margin of the lake. It is fed by the Kalsagadh, which enters it at the north-western corner and drains a long and narrow valley extending as far as the Gagar peak to the east of the Gagar pass above Ramgarh. This river carries with it great quantities of stone and gravel into the lake and thus added to the land slips continually occ

from the hills on either side, must in time have an appreciable effect on its depth and area. The lake is formed by a barrier composed of *débris* thrown down by landslips. In this barrier there is an outlet which forms the source of an affluent of the Gola. An embankment was made by Sir Henry Ramsay with a sluice-gate, by which the level of the lake was raised in order to stop water for irrigation purposes in the Bhabar; but it soon gave way, as insufficient provision was made for passing floods, and has not been restored. The water of the lake is clear and of a beautiful blue colour except in the rains, when it becomes of a dirty muddy colour owing to the immense quantity of silt carried into it; for the same reason it is not good for drinking purposes, and whether on account of the water or the climatic influences of the enclosed valley, Malwa Tal has the reputation of being very unhealthy. The lake abounds in fish, and there is a dāk bungalow here for the use of sportsmen and tourists.

MUKHTESAR, Patti MAHRURI BICHHLI, Pargana MAHRURI.

Mukhtesar, locally known as Motesar, is situated in latitude 29° 28' north and longitude 79° 40' east, on the crest of a hill which runs along the western boundary of the patti, with an elevation varying from 7,500 to 7,702 feet. It lies at a distance of some five miles south-east of Peora on the road from that place to Dhari; a second road connects Mukhtesar with Nathua Khan on the road from Peora to Ramgarh. The distance to Naini Tal is 23 miles and to Almora fifteen miles. Kathgodam and the railway is reached either by the road from Ramgarh to Bhim Tal or by that from Dhari to the same place, the latter being the shorter, as the distance to the railway by this route is 24½ miles. Prior to 1889 Mukhtesar was of very little importance, and only known for its temple of Mahadeo and one or two smaller shrines of local deities. On the crags a little below the peak are certain marks which the people believe to be the footprints of elephants, horses and camels, the army of some deity who, wishing to pass this way, was opposed by the local godling. The latter obtained deliverance (*moksha*) from the penalties of his act by being sent to live among the Agaris, and hence the name

In 1889 the Government of India proposed the

establishment of a laboratory at Poona, from which Pasteur's vaccine for anthrax could be made and distributed. The services of Dr. Lingard were secured in England, and he arrived in Poona in September, 1890. As anthrax, as a disease amongst cattle in India, is of secondary consideration compared with rinderpest, Government deemed it advisable to proceed with the investigation and manufacture of a serum for the protection of bovines against the latter disease. For this purpose Poona was deemed unsuitable as the headquarters of a laboratory, and it was decided to remove it to the Himālayas with a view to obtain amongst other requisites a large area of ground for isolation purposes, high elevation and a modified temperature. For these reasons Mukhtesar was selected in August, 1893; in the middle of 1896 work was commenced, but it was not until September, 1898, that the laboratory was placed in working order. After being fairly started for one year, unfortunately a fire broke out on the evening of 27th September, 1899, and in three hours the work of six anxious years was destroyed. Government immediately undertook the restoration of the building, which was completed and equipped by the end of 1901.

The area occupied by the laboratory estate, including a small forest reserve, is enclosed by the main Mukhtesar ridge, which runs from north-west to south-east, and by the spurs thrown off to the north, which diverge inwards and drop to about 5,000 feet. The area is well drained by numerous affluences of the Pharka river, which in its turn becomes a tributary of the Kosi. The enclosure is about 3,000 acres in extent and consists chiefly of oak forest and chīr trees on the lower elevations. Within it stands the laboratory building and the quarters for the Imperial Bacteriologist, his assistant and staff. The laboratory building is two-storeyed, and consists of rooms for microscopy, photography, the library and office. The settlement is provided with a telegraph and post-office, and a bania's shop, as well as a small bazar and a dharamsala. About half a mile to the north is the nursery garden, also belonging to the institution. This was founded by Sir Henry Ramsay and was named Buck Bagh, after Sir Edward Buck, the then Secretary of the Revenue and Agriculture Department of the Government of India who encouraged

the horticultural gardens in these hills. At Ritani, which stands at an elevation of 6,100 feet, a cattle-shed is maintained for the accommodation of healthy animals required for the purpose of serum manufacture. Within the laboratory premises a meteorological observatory is maintained at an elevation of 7,600 feet, and observations are recorded three times a day regularly. The chief object of the institution is the investigation of the etiology of diseases affecting animals and the means to protect them. Amongst other maladies the most important now under investigation are rinderpest, anthrax, surra, lymphangitis-epizootica and glanders. Large quantities of anti-rinderpest serum have been manufactured and issued for use in the field. Serum for anthrax has also been prepared and found to be efficacious. Further, mallein, tuberculin and tetanus anti-toxin are prepared and issued. The issue of these testing agents will be continued when the laboratory is fully equipped. At present, Government is arranging to have the depôts opened in each province for the storage of anti-rinderpest serum manufactured at this laboratory. District Board Veterinary Assistants from the Panjab and United Provinces are instructed at Mukhtesar in the technique and use of different kinds of sera. A branch depôt of this laboratory has lately been constructed at Barcoilly, where the manufacture of anti-rinderpest serum and research work will be carried out by the staff during the winter months. The average annual charge to Government incurred under upkeep of the staff, and the laboratory expenses, including purchase of animals, apparatus and chemicals, feed and keep of live-stock, and books and journals, is about Rs. 50,000 per annum.

NAINI TAL, *Patti and Pargana* CHHAKHATA.

The headquarters of the district is situated in 29° 24' north latitude and 79° 28' east longitude, in a valley of the Gagar range running east and west, which is bounded on the north by the peak of China, which rises to a height of 8,568 feet, continued by the Alma peak and the Sher-ka-danda to the eastern extremity, where the ridge descends almost to the level of the lake. On the west the rugged hill of Deopatha rises to a height of 7,987 feet, and on the south Ayarpatha attains an elevation of 7,461 feet, diminishing gradually towards the east while the intervening portion

between these two hills is a mass of rocks piled up loosely together, which goes by the name of Handi Bandi, and is formed of the transition limestone of Mussoorie, exhibiting everywhere vast rents, fissures and boulders of all sizes and shapes. The eastern boundary is the pass through which the surplus waters of the lake find an exit, forming the principal source of the Ballia river, which falls into the Gola near Ranibagh. The western end of the valley consists of a series of gentle undulations formed by the *débris* of the surrounding hills.

The eastern end is occupied by the lake which gives its name to the station. The surface of the lake has an elevation of 6,350 feet above the level of the sea. The greatest length is 1,567 yards and the greatest breadth 506 yards. The circumference by the road is 3,960 yards or a little over two miles, and the superficial area 120·5 acres. The greatest depth is 93 feet, and the least depth on a ridge running through the centre of the lake is 20 feet. There is but one important feeder which collects the drainage of the western end of the valley, but numerous other masonry drains empty into the lake on all sides and necessarily carry with them a large amount of refuse to pollute the water, which would otherwise be perfectly good for drinking purposes. The lake is very slowly, but surely, filling up from the immense quantity of *débris* and silt swept into it during the rains, but as yet there is no perceptible diminution of its area or depth, in spite of the great landslip of 1880. In the lake itself there is a sulphur spring nearly opposite Smuggler's Rock in 63 feet of water, and another outside it near the Talli Tal bazar.

China, the principal mountain of those that enclose the valley, raises his furrowed sides on the north almost precipitously at a distance of about one mile and a quarter from the lake. On the north, the crest is prolonged in a ridge covered with oak and rhododendron. The southern face is clothed with a forest of cypress trees, which here alone on the lower ranges appear to be indigenous. The crest is formed of limestone on a basis of clay slate which dips towards the west or north-west. To the west of China and connected with it by the ridge is Alma, which commands a fine view of the Khairna valley and the northern hills. Beyond this is a ridge leading to Sher ka-danda a hill thickly covered

with forest. The east and south-east extremities of Sher-kanda abruptly end in precipices formed of clay slate which caused considerable difficulty in making the road to Ramgarh and Almora and the old cart-road to the Brewery and Ranibagh. To the north-east it is connected by a narrow ridge with Liriya-Kanta, which rises to 8,144 feet; its summit is quartz, bold and craggy towards the north and undulating to the south-east towards Bhowali, and clothed with forests of oak and pine.

To the east of China and connected with it by a pass known as China-Khal, which communicates with the villages lying along the headwaters of the Bhakra river, is Deopatha, which rises at a very sharp angle from the Kaladhungi gorge. The sides of this peak and its base are strewn with immense boulders of limestone. Beyond the Kaladhungi road rises Ayarpatha, the sides of which slope down sharply to the lake, while the eastern shoulder curves round to enclose the valley and sinks to the level of the lake at the Talli Tal bazár. To the south-east of Ayarpatha are the grounds of Government House, once known as Gaiwala and later as the Sherwood estate, a series of swelling lawns thickly wooded and terminated abruptly by magnificent precipices overlooking Khurpa Tal and the Bhabar from the base of which issues the Nihal river flowing by Kaladhungi into the Bhabar and Tarai.

Naini Tal lies at a distance of ten miles by the bridle-road from Ranibagh, although the length of the cart-road is more than twice as great; 32 miles from Almora by the Ramgarh road, and 30 miles by the Khairna route; 23 miles from Ranikhet and 16 miles from Kaladhungi at the foot of the hills. The place was known in ancient days, for it is mentioned in the Skanda Purana under the name of Tririkhi-sarovara or Tris-eswar, the lake of the three Rishis—Atri, Pulastya and Pulaha. The legend runs that these sages on their pilgrimage came to China and found no water there. So they dug a large hole which was at once filled with water, and hence the lake obtained its name. The present appellation is derived from an old temple of the goddess, Naini Debi, which was built on the edge of the lake and was destroyed by the landslip of 1880, to be subsequently replaced by a modern structure

Prior to 1839 the glen at the head of the lake was covered with a dense forest, only resorted to by the herdsmen of the surrounding villages who brought their cattle there during the hot weather and rains for the abundant pasturage of the valley. The place was regarded with some awe, not only on account of the numerous tigers and other wild animals, but also because of the demons and fairies that were universally supposed to haunt the neighbourhood. The herdsmen agreed to assemble there on a certain day, for none dare go alone. On arrival they herded their cattle in a stockaded pen with their own huts in the centre, and for further security they went fully armed. None the less, the loss of cattle was considerable, and frequently men, too, were killed by tigers. Their first duty was to propitiate the goddess, and thus the temple retained its importance and sanctity. On certain days numbers of people resorted hither for bathing in the lake, which was the special property of the goddess. Otherwise the place was apparently unknown; and although Mr. Traill, the Commissioner, mentions its existence, there is no evidence to show that he ever visited Naini Tal. In March, 1839, Mr. Batten was shooting at Haldwani with his brother-in-law, Mr. P. Barron. They visited Bhim Tal and then proceeded to Naini Tal, approaching it from the Khairna side and returning by Ramgarh. The natives at first refused to guide them and denied the existence of a lake, the reason being that they shrank from the idea of the desecration of so sacred a spot by the intrusion of strangers. In 1841 an issue of the Calcutta "Englishman" announced the "discovery of a lake in the vicinity of Almora." This was followed up by a letter from Mr. Barron under the name of "Pilgrim" in the "Agra Akhbar." He writes: "An undulating lawn with a great deal of level ground interspersed with occasional clumps of oak, cypress and other beautiful trees, continues from the margin of the lake for upwards of a mile up to the base of a magnificent mountain standing at the further extreme of this vast amphitheatre, and the sides of the lake are also bounded by splendid hills and peaks which are thickly wooded down to the water's edge. On the undulating ground between the highest peak and the of the lake, there are capabilities for a ,

cricket-ground, &c., and building sites in every direction for a large town."

In 1842 Mr. Barran again visited Naini Tal, and asked Mr. Batten for a contractor to build twelve bungalows, and the latter introduced him to Lala Moti Ram Sah, of Almora, who undertook the work, while at the same time Mr. Lushington, the Commissioner, commenced the erection of a small house. Rules were drawn up in 1842 for the grant of lands for building purposes at a small ground-rent, to be paid by the occupant so long as the land was used for the purpose for which it was required. The lease, too, contained clauses binding the lessee to the observance of such rules as the local authorities with the sanction of Government should from time to time prescribe. From that date Naini Tal increased rapidly in size and prosperity. The bungalows were advertised as soon as completed, and rapidly occupied. Mr. Lushington allotted sites for a bazar and public buildings, the native houses being at first confined to Talli Tal, while the earlier bungalows were built towards the eastern end of the lake. Mr. Barran launched the first boat on the lake, and among other incidents records the wounding of a tiger on Ayarpatha. Even as late as 1845 the site of the upper bazar was still occupied by bamboo jungle, which even then harboured tigers. Leopards, goral and even sambhar were frequently found there. This accounts for the name given to the church, which was built in 1846 by public subscription, at an original cost of Rs. 15,000, and dedicated to "St. John in the Wilderness." By the end of that year houses had begun to spring up in every direction, and Captain Arnaud was building Sherwood in Gaiwala Khet.* At the time of the mutiny Naini Tal was a well-known sanitarium and formed a refuge for the fugitives from Bareilly, Pilibhit and elsewhere. Sir Henry Ramsay made Naini Tal his headquarters, and from it conducted the operations against the rebels in the Tarai.

It was not long after this that Naini Tal became the summer seat of Government for the North-Western Provinces. It would appear that the first house occupied by the Lieutenant-Governor stood on the site of the present Ramsay Hospital and

was called "Stoneleigh;" it was first occupied about 1862. In 1865 the then Lieutenant-Governor built a house on the Maldon estate on Sher-ka-danda, and sold it to Lala Moti Ram Sah for Rs. 40,000 at the end of his tenure of office. From that date until 1879 it was rented by the successive Lieutenant-Governors for Rs. 3,600 per annum. It narrowly escaped destruction in the landslip of 1880, which occurred a few months after it had been vacated. The third house was on the top of the Sher-ka-danda ridge and above Maldon. It was begun in 1875 and completed in 1879. This continued to be the Lieutenant-Governor and Chief Commissioner's residence till 1895, when it was condemned as unsafe. A move was then made to the opposite side of the valley, and the choice of a house fell upon Sherwood, which is still situated within the Government House grounds on Gaiwala Khet, and was formerly occupied by the Diocesan Boys' School. This was the official residence of the Lieutenant-Governor for five years, but was only regarded as a temporary arrangement. A large estate was acquired by Government, stretching from the top of Ayarpatha to the crest of the southern spur overlooking the plains, and the present palatial building was begun in 1896 and completed in 1900.

In the meantime Naini Tal had become a great and populous settlement. Houses, shops, schools, and hotels had sprung up in all directions. Barracks were built for a company of Gurkhas below the Talhi Tal bazar; a convalescent depôt for British soldiers was made at Kalekhan down the old cart-road, and a small cantonment was established at Khurpa Tal, a short distance down the Kaladhungi road. It was still somewhat difficult of access, for visitors had to come by the long and difficult road from Moradabad and Kaladhungi, but this was soon supplanted by the cart-road from Bareilly and Ranibagh. In 1882 the railway to Kathgodam was constructed, and this gave a great impetus to the growth of the settlement. Later on, the new cart-road, by which all heavy traffic comes into Naini Tal, was made from the Brewery as a relief line in case of subsidences; and none too soon, for the Brewery landslip of 1898 carried away a large portion of the old cart-road on the eastern side of the Ballia ravine. The present road follows the line of the Manora spur

and winds down in a long detour to the Brewery. From the southern face of the Manora crest an additional bridle-path has been constructed, joining the cart-road at Nalena; this came into use during the rains of 1901, when a serious subsidence of the Kalekhan hill threatened the Brewery and the old bridle path.

Naini Tal now is a place of considerable importance, at any rate during the summer months, for in the winter there are few European residents and the greater number of the native traders leave the bazar for their homes. Besides the Government offices, and those of the Commissioner of Kumaun and the Deputy Commissioner of Naini Tal, there are the offices of the headquarters staff of the Bengal Command, which is permanently located here, the offices of the Conservator of Forests and of the Naini Tal, Kumaun and Garhwál Forest Divisions; of the Executive Engineer, Kumaun Division, a tahsil, two police-stations at Malli Tal and Talli Tal, two post and telegraph offices, and a large number of schools, shops, hotels, and the Ramsay and Crosthwaite Hospitals, to which reference has been made in Chapter IV. There are several churches besides that of St. John in the Wilderness. St. Nicholas and St. Mary's church on Ayarpatha, adjoining the grounds of Government House, was consecrated in 1896, and was built primarily to meet the needs of the two diocesan schools. There are two Roman Catholic churches, one the chapel of St. Mary's Convent and the other on the Mall. Above the Talli Tal bazar is a large Methodist church, built after the landslide of 1880, and there is a small native church also belonging to the American Mission, built in 1859, and presided over by a native pastor.

The affairs of the settlement are managed by a municipal board, the history of which has been already given in Chapter IV; while those of the cantonment are as usual in the hands of a Cantonment Committee.

The population of Naini Tal varies greatly with the season of the year. Thus, in the month of September, 1880, it numbered 10,054 souls, while at the regular census in the following February it had fallen to 7,589. At the regular census of 1891 there were 8,455 inhabitants in the municipality and cantonment. At the last census of March, 1901, the number of

inhabitants was 7,609, of whom 5,248 were males; but at a preliminary enumeration taken on the 7th of September in the preceding year the station contained no less than 14,220 inhabitants, of whom 10,142 were males. Classified according to religious, there were then 9,043 Hindus, 2,906 Musalmans, 2,214 Christians and 57 Jains, Aryas, Parsis and others. The increase in the population of Naini Tal may be partly attributed to the establishment of the headquarters of the Bengal Command here, and partly to the improved water-supply and other causes. There is no room for any great extension, but it has grown in importance as a trade centre. This is illustrated by the fact that the proportion of the native population to the whole is 86·7 per cent. as against 76·7 per cent. in Mussoorie, while the permanent population is also much larger.

No account of Naini Tal would be complete without a reference to the great landslip of 1880, a year that will ever be memorable in the annals of the station. I cannot do better than quote the words of Mr. E. T. Atkinson from the old "Kumaon Gazetteer," for he was present in Naini Tal at the time. He writes:—"The rain commenced to fall steadily and without cessation from Thursday, the 16th September, 1880 until Sunday evening, the 19th. During Friday and Saturday 33 inches of rain fell, of which 20 to 25 inches had fallen in the 40 hours proceeding Saturday evening. The rain was accompanied by violent gusts of wind from the east; the roads were injured, the watercourses choked, and there was a general saturation of the soil in all places where the loose *débris* of rotten shale, of which the northern range is composed, allowed the water to penetrate. There was much clearing of new sites during the previous year and the builders did not always provide for the derangement of the natural drainage channels. In many places the water was allowed to sink into crevices in the hill and find new outlets for itself, and this it did with a vengeance. In 1866 a slip occurred to the west of the present one, destroying the old Victoria hotel. In 1869 this was enlarged and the scored sides of the ridge below Alma bear witness to its extent. On the site where the slip of 1880 occurred was the Victoria hotel and its offices, and below it was the temple on the margin of the lake,

and close to it Bell's shop, and further on the Assembly Rooms also on the margin of the lake. About 10 A.M. on Saturday morning the first slip occurred in a part of the hillside immediately behind the Victoria hotel, carrying away a portion of the out-houses and of the western wing of the hotel and burying in the ruins an English child and its nurse and some native servants. Working parties were called for and Mr. Leonard Taylor, C.S., Mr. Morgan, Overseer, and a party of soldiers and officers from the depôt set to work to dig out those that were buried. In the meantime, all the residents in the hotel removed to safer quarters except Colonel Taylor, R.E., who retired to a small detached room below the hotel, generally used as a billiard-room, and Major and Mrs. Morphy, with Mrs. Turnbull, who came to offer their assistance, proceeded to the Assembly Rooms. All had made preparations to leave, as nothing more could be done, and about twenty minutes past one I passed from the hotel to the bazar, and whilst passing with Mr. Wright, heard a noise and saw a large boulder falling from the cliff above towards the hotel. I thought nothing of it and went on. In another ten minutes the landslip took place."

"The whole hillside was one mass of semi-fluid matter and required little to set it in motion. The state of the hill has been described as in dry weather a mass of the consistence of oatmeal which, when mixed with water, spread out like porridge. The motive power was a shock of earthquake—a very common occurrence in these hills, and which was felt on that day by competent observers in the Bhabar below and in Naini Tal itself." This set the fluid mass in motion, and the result is thus told:—

"A rumbling noise, similar to that occasioned by the falling of large masses of earth, was heard by many in the station; and such as had an opportunity of looking towards the direction of the crash could plainly see vast clouds of dust rising from the situation above described. It was apparent that a large portion of the hill behind the hotel, from the upper mall, disunited, had descended with enormous velocity and violence, had completely buried the hotel, and had dashed together into an unrecognisable heap the orderly room the shop and the Assembly Rooms. The

wave of earth and water, making a clean sweep of the extensive hotel premises, had apparently driven the shop on to the Assembly Rooms, carrying forward the massive building over 50 yards on to the public rooms, a portion of which were hurled into the lake and the remainder reduced to a heap of ruins. The catastrophe, as far as can be ascertained, was the work of a few seconds only ; so that escape on the part of any who happened to be in the course of the avalanche was practically impossible.

“The dead and missing numbered 151, of whom 43 were Europeans and Eurasians, including Colonel Taylor, Major Morphy, Captains Balderston, Goodridge and Haynes, Lieutenants Halkett, Sullivan, Carmichael and Robinson ; L. Taylor, C.S. ; Rev. A. Robinson, Doctor Hannah, Messrs. Noad, Bell, Knight, Moss, Tucker, Morgan (two), Sheils (four), Drew, Gray, five non-commissioned officers and nine privates, Mrs. Morphy, Mrs. Turnbull and two children and 108 natives. The escapes were many and narrow. Sir Henry Ramsay, whilst directing operations at the east end of the lake, was overtaken by the great wave caused by the *débris*, swept into the lake, and though at one time waist-deep, succeeded in reaching safely on an ascent off the road ; but a British soldier and several natives were swept away close beside him. Mr. Walker of the Secretariat was covered up to his shoulder by the outer fringe of the mud torrent, but escaped. A soldier and a native lad were swept into the lake and escaped by swimming. Mrs. Knight and Mrs. Gray were in the upper story of the building known as Bell’s shop, and were carried with it and found amid the girders of the iron roof landed on a heap of the *débris* almost unhurt. Immediately after the landslip jets of water poured forth from reservoirs within the hill on the newly-made face and for some time maintained a direction and volume which showed the great quantity and force of these factors in the landslip. I will pass over the Saturday night, when no one knew whether there would be another slip, as the rain never ceased and boulders continually came crashing down from the hills above. Great cracks opened up and became more easily traced : one from the Mayo hotel up to Saint Loo cottage, the wall of which was fissured sufficiently to admit of a person walking through, and across Government

House, an arch in which was cracked, and over the northern slope of the hill. Another line further west split in two a rock on the summit of the little ridge above Fairlight; a third line proceeded from the Club to the end of the China ridge by the road west of Fairlight. All these were caused by the earthquake, which was as destructive on the northern slopes of Alma and China as within the valley. Sir Henry Ramsay ably aided by Mr. Willcocks, C.E., and Mr. Lawder, C.E., set to work, and soon placed the roads and drainage on a better footing than before."*

The result was that large protective works were taken in hand at a great cost, which was defrayed by a loan from Government. These works have been tried by heavy rains since, and have thoroughly stood the test. Many subsequent drains have been made, so that the station is far safer than ever it was before, while the roads during the rains are very greatly benefited. Another result of the landslip was the opportunity provided for extending the space available for a recreation-ground. The area known as the Flats at the upper end of the lake was largely increased, and thus the station was provided with a ground that serves for polo, cricket, hockey and football, and which has done duty as a race-course. This ground is the property of Government, but its upkeep and management is entrusted to the municipality, who have delegated their authority, so far as the management is concerned, to a committee selected from the various clubs. In 1899 rent was first charged for the use of this ground to the extent of Rs. 1,000 per annum; this sum is paid by the clubs in the proportion determined by the Gymkhana Committee.

NAINI TAL *Tahsil*.

This is the northern subdivision of the district, and comprises the whole of the hill country north of the Bhabar. It is divided into the parganas of Chhakhata, Kotah, Dhaniyakot, Ramgarh, Kutauli, Mahruri and Dhyaniarau. All these, as well as their component pattis, have been separately described, and in the general account of the district the hill pattis have been dealt with under the several heads, so that there is no need for any

* See Mr H C A Conybeare's report of 11th October 1880

further mention of the tract. The subdivision of Naini Tal dates from the formation of the district in 1891. Prior to that the hill parganas were, for the most part, included in the old Bhabar tahsil of the Kumaun district. It is in charge of a peshkar resident at Naini Tal, who performs the ordinary duties of a tahsildar, so far as they are applicable to the hills. The area under his charge is very extensive, but the population is small and scattered. At the last census it numbered 43,637 souls; but this was taken in March, when a large proportion of the inhabitants were absent in the Bhabar. At the preliminary enumeration of October, 1900, the returns gave a population of 61,023 persons. They are almost all Hindus, and, with the exception of the residents of Naini Tal itself, are nearly all agriculturists or engaged in some cognate occupation.

NANAKMATA, *Pargana* NANAKMATA, *Tahsil* KICHHA.

This village, from which the pargana takes its name, lies in latitude 28° 50' north and longitude 79° 49' east, on the main Tarai road between Sitarganj and Khatima, at a distance of six miles from the former and ten miles from the latter. The place is small and of little importance. In 1901 it contained a population of only 571 persons, a considerable proportion of whom are Tharus. Markets are held here twice a week, on Mondays and Fridays. The place is chiefly famous for a shrine of Guru Nanak, the founder of the Sikh religion. Mention is made of this shrine as early as the reign of Aurangzeb, and the place still possesses some considerable local sanctity. The temple is in the charge of a Mahant who holds the village in revenue-free tenure as well as Chaumahla in Kilpuri.

NANAKMATA *Pargana*, *Tahsil* KICHHA.

This pargana forms part of the eastern Tarai, lying between Bilheri on the east and Kilpuri on the west. To the south lies the district of Pilibhit and to the north the Chaubhainsi Bhabar. The eastern boundary is formed by the Kamin river as far as its junction with the Dooha and thence southwards by the latter river. The Dooha also forms the northern boundary for a considerable distance. To the west of the pargana the boundary is formed for

half its length by the Kailas, which turns to the south-east just below the submontane road and cuts off a small portion from the rest of the pargana. This tract west of the Kailas formerly constituted a separate pargana under the name of Mainajhundi, a well-cultivated stretch of country that is in appearance very similar to the northern portions of the Bareilly and Pilibhit districts. Beyond the Kailas the country resembles that of the Tarai generally. Besides the rivers already mentioned, there is the Khakra in the centre and numerous other small streams, which feed the larger rivers of Pilibhit. The valleys of these rivers and the lowlying land are covered with a luxuriant jungle growth, but the higher ground is fairly well cultivated by the Tharus. In the north the amount of waste land is greater and there is little cultivation. All the rivers have wide beds, in which they alter their channels from year to year. Frequently they carry down heavy floods which do a certain amount of damage. The climate is bad, although it improves towards the south, where the villages are chiefly inhabited by the immigrants from the plains. In the north the Tharus alone are able to withstand the prevalent malaria. The total area of the pargana is 51,136 acres, or roughly 80 square miles. There are altogether 77 villages, of which 56 are *mustajiri*, fifteen zamindari, one revenue-free and only five under direct management. These last were originally *mustajiri*, but the owners being unable to pay were bought out by Government. The pargana thus differs very greatly from the rest of the Tarai and has been assessed in regular settlements in the same manner as the ordinary plains districts.

The population of the pargana at the census of 1891 numbered 13,575 persons. At the following census it rose to 16,803, but fell again in 1901 to 14,898, of whom 8,172 were males. Musalmans are fairly numerous, with the total of 3,279 persons. There is no village of any size in the pargana, the largest being Bijti and Sarkara in the extreme south. Both Nanakmata and Mainajhundi are quite insignificant places. The Hindu inhabitants are chiefly Tharus in the north, these people being found in larger numbers here than in any other pargana, and Kisans, Chamars and K in the southern villages. For

been greatly improved of late years by an avenue of trees planted by the Public Works Department.

RAMGARH, *Patti* RAMGARH MALLA, *Pargana* RAMGARH.

A village with a dāk bungalow on the upper road from Naini Tal to Almora. It is situated on the northern slope of the Gagar about half way down from the summit of the pass to the bed of the Ramgarh river. The bungalow stands on a small projecting ridge, just below the bazār, in latitude $29^{\circ} 26'$ north and longitude $79^{\circ} 34'$ east, at a height of 5,872 feet. Next to it stands a Public Works Department inspection bungalow. There is also a post-office and a dharmshala or native rest-house in the village. Naini Tal is about 13 miles distant and Peora 10 miles, the total distance from Ramgarh to Almora being 19 miles. The village is of considerable antiquity and possesses an old temple with an inscription. There are two freehold estates here, owned by Europeans, on which tea and fruit are extensively grown, the whole northern face of the hillside having been completely cleared for the purpose. Water is supplied to the village and bungalow by a series of pipes leading from the summit of the pass. The road from Naini Tal to Ramgarh is exceedingly picturesque. It passes under Liriya Kanta to Bhowali in the Ninglat valley, and thence ascends steadily for four miles to the Gagar peak, whence it descends sharply for two miles to Ramgarh. The view from the highest point is almost unrivalled. On the one hand the whole of the snowy range extends from east to west, and on the other rise up the lower hills, among which are to be seen the lakes of Chhakhata, and beyond the boundless expanse of the plains stretching out from the forest belt of the Bhabar. From Ramgarh the road descends again to the bottom of the valley, where a branch takes off to Ratighat on the Naini Tal-Ranikhet cart-road. It then crosses the Ramgarh river by an iron suspension bridge, past the old deserted iron works and the flourishing village of Nayakana to Nathua Khan along the bare and hot side of the Pathargarh mountain. Thence it descends again to the bed of the Deodar stream and after another long climb to the Laldana Binaik pass reaches the Peora bungalow

half its length by the Kailas, which turns to the south-east just below the submontane road and cuts off a small portion from the rest of the pargana. This tract west of the Kailas formerly constituted a separate pargana under the name of Mainajhundi, a well-cultivated stretch of country that is in appearance very similar to the northern portions of the Bareilly and Pilibhit districts. Beyond the Kailas the country resembles that of the Tarai generally. Besides the rivers already mentioned, there is the Khakra in the centre and numerous other small streams, which feed the larger rivers of Pilibhit. The valleys of these rivers and the lowlying land are covered with a luxuriant jungle growth, but the higher ground is fairly well cultivated by the Tharus. In the north the amount of waste land is greater and there is little cultivation. All the rivers have wide beds, in which they alter their channels from year to year. Frequently they carry down heavy floods which do a certain amount of damage. The climate is bad, although it improves towards the south, where the villages are chiefly inhabited by the immigrants from the plains. In the north the Tharus alone are able to withstand the prevalent malaria. The total area of the pargana is 51,136 acres, or roughly 80 square miles. There are altogether 77 villages, of which 56 are *mustajiri*, fifteen zamindari, one revenue-free and only five under direct management. These last were originally *mustajiri*, but the owners being unable to pay were bought out by Government. The pargana thus differs very greatly from the rest of the Tarai and has been assessed in regular settlements in the same manner as the ordinary plains districts.

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administrative purposes the pargana belongs to the peshkari of Sitarganj. The total cultivated area of the pargana in 1902 amounted to 21,535 acres or about 40 per cent. The kharif is the principal harvest and rice by far the most important crop. Besides this there is a small amount of maize and sugarcane. In the rabi, wheat takes the lead, followed by gram and lahi. Irrigation is chiefly effected from the Bahgul canal in the south, while the Tharu villages of the north are watered by means of their own earthen dams. In the southern portion rents are paid in kind except in the case of sugarcane, cotton and maize; the rate varies from one-third to one-fifth of the crop. In the north among the Tharus the cash system known as *sakim charida*, described in the account of Bilheri, is adopted for the kharif, while in the rabi rents are paid in kind at the rate of one-fifth or one-sixth of the crop. In Nanakmata proper the proprietors are mostly Tharus and are in prosperous circumstances. In Mainajhundi they merely occupy the position of *mustajirs* and have never formally received zamindari rights. The revenue-free village of Debipura belongs to the Mahant of Nanakmata, who also holds part of Nanakmata itself on the same tenure. These grants are very ancient and have been confirmed in perpetuity.

The first regular settlement of Nanakmata was made in 1840 by Mr. Robinson, the then Commissioner of Rohilkhand, while previous to this a series of summary settlements had been made. Mainajhundi formerly was included in pargana Kichha of Bareilly, and was settled together with the rest of that district. The settlement expired in 1880, and this portion of the pargana was assessed together with Nanakmata by Mr. Macdonald in 1884. The expiring demand was Rs. 9,406, and this was raised by Mr. Macdonald to Rs. 11,700, at which it stands at the present time, the incidence per acre of cultivation being 9·5 annas for the whole pargana, but in the better villages to the south it is naturally much higher.

NAUKUCHHIYA TAL, *Patti* AND *Pargana* CHILAKHATA.

This, the lake of the nine corners, lies at a distance of two and a half miles from Bh m Tal and 14½ miles from Naim Tal,

in latitude $29^{\circ} 19'$ and longitude $79^{\circ} 35'$, at an elevation of about 4,000 feet. The lake is of irregular shape, being about 1,000 yards long from north to south, and 750 yards broad at the widest part. As its name implies, the shore is indented with numerous bays, which contribute in no small degree to the picturesqueness of the scenery. It is in fact the prettiest of all the Kumaun lakes, lying in a basin with high mountains on three sides, and with thick oak woods coming down to the water's edge. The northern end is open, the water being held in by a low barrier, from the top of which a fine view is to be obtained of Bhim Tal and the surrounding hills. In the north-west corner there is a shallow bay covered with reeds and lotus, which when in flower add much colour to the scene. The lake is full of fish, and better sport is obtainable here than at Bhim Tal; a pass is required here, as on the other lakes. Close to the temple at the north-western corner of the lake there is an outlet; but very little water ever escapes by it, as the surplus appears to make its way out through subterranean channels underneath the hills to the south and west. There is reason to believe that at a former period the lake covered a very much larger surface, as the surrounding country bears every appearance of having been subject to the action of water. In this case the waters would have escaped through the lower strata of the hollow now occupied by the lakes of Naukuchhiya and Bhim Tal.

PEORA, *Patti BISAUD BICHILA*,
Pargana KUTALI.

A village with a dāk bungalow on the upper road from Naini Tal to Almora, at a distance of 10 miles from Ramgarh, $8\frac{1}{2}$ miles from Almora, and 23 miles from Naini Tal. The bungalow stands in latitude $29^{\circ} 30'$ north and longitude $79^{\circ} 37'$ east, at an elevation of 5,690 feet above the sea. From it on clear days an exceptionally fine view of the snows is to be obtained. The place is very cold in winter, being on the northern slope of the Mukhtesar range. From Peora there is a very long descent to the Garari bridge over the Sual just below its junction with the Kumniya Garh, and from this there is a very steep and tiring ascent up a bare hillside to Almora. The road has, however,

been greatly improved of late years by an avenue of trees planted by the Public Works Department.

RAMGARH, *Patti* RAMGARH MALLA, *Pargana* RAMGARH.

A village with a dāk bungalow on the upper road from Naini Tal to Almora. It is situated on the northern slope of the Gagar about half way down from the summit of the pass to the bed of the Ramgarh river. The bungalow stands on a small projecting ridge, just below the bazār, in latitude $29^{\circ} 26'$ north and longitude $79^{\circ} 34'$ east, at a height of 5,872 feet. Next to it stands a Public Works Department inspection bungalow. There is also a post-office and a dharmshala or native rest-house in the village. Naini Tal is about 13 miles distant and Peora 10 miles, the total distance from Ramgarh to Almora being 19 miles. The village is of considerable antiquity and possesses an old temple with an inscription. There are two freehold estates here, owned by Europeans, on which tea and fruit are extensively grown, the whole northern face of the hillside having been completely cleared for the purpose. Water is supplied to the village and bungalow by a series of pipes leading from the summit of the pass. The road from Naini Tal to Ramgarh is exceedingly picturesque. It passes under Liriyā Kanta to Bhowali in the Ninglat valley, and thence ascends steadily for four miles to the Gagar peak, whence it descends sharply for two miles to Ramgarh. The view from the highest point is almost unrivalled. On the one hand the whole of the snowy range extends from east to west, and on the other rise up the lower hills, among which are to be seen the lakes of Chhakhata, and beyond the boundless expanse of the plains stretching out from the forest belt of the Bhabar. From Ramgarh the road descends again to the bottom of the valley, where a branch takes off to Ratighat on the Naini Tal-Ranikhet cart-road. It then crosses the Ramgarh river by an iron suspension bridge, past the old deserted iron works and the flourishing village of Nayakana to Nathua Khan along the bare and hot side of the Pathargarhi mountain. Thence it descends again to the bed of the Deodar stream, and after another long climb to the Laldana Binaik pass reaches the Peora bungalow.

RAMGARH *Pargana*, *Tahsil* NAINI TAL.

The pargana, which takes its name from the old village of Ramgarh, is a small and compact tract composed of the three pattis of Ramgarh Malla, Ramgarh Talla and Agar. It lies between the Gagar and Lohukot ranges, both of which unite towards the east in the Mukhtesar peak. The uplands belong to Agar, and there is hardly any *talan* or lowlands capable of irrigation. The three pattis have been separately mentioned, and reference must be made to the several articles for a more detailed description of the pargana. In the winter months almost the whole of the population descends to the Bhabar, where they cultivate their own lands and return to the hills after the gathering in of the spring harvest. Thus it happened that at the last census the total number of inhabitants was only 1,279 persons, almost all of whom were Khasiyas and Doms; at the preliminary enumeration of the previous October, however, the returns showed a population of no less than 4,506 persons. This included the Nayaks of Nayakana, all of whom migrate to Haldwani and the Bhabar. The revenue demand for the pargana now stands at Rs. 4,653, which includes the assessment of the potato fields. The pargana is very well supplied with means of communication. Through Ramgarh passes the main road from Ranibagh to Peora and Almora, and this is joined by the road from Naini Tal to Ramgarh. Another road leads from Ramgarh to Ratighat on the Ranikhet cart-road, and a fourth goes from Nathua Khan on the Almora road to Mukhtesar. Besides the dák and inspection bungalows at Ramgarh, there are forest bungalows at Maulani, Gagar and Ninglat.

RAMGARH MALLA *Patti*, *Pargana* RAMGARH.

This patti lies on the high Gagar ridge which separates the pargana of Ramgarh from Dhaniyakot, which forms the boundary on the west. To the north, across the Ramgarh river and beyond the range that rises on its right bank, lies Ramgarh Talla, while to the east is Agar and to the south Mahruri Talli. The road from Almora to Naini Tal runs through this patti, with a dák bungalow at Ramgarh which is separately mentioned. All the cultivation is upland and consists largely of potato fields and

the two fee-simple estates in Ramgarh, where the hillsides have been stripped of forest and laid out with tea and fruit gardens. Almost all the inhabitants desert their homes during the cold weather and migrate to the Bhabar, where they own large areas of land in the Haldwani circle. The largest villages lie amid the potato fields of the Gagar range, notably Bohrakot and Jhutyā. Besides these mention must be made of Nayakana, a large village above the Almora road about two miles from Ramgarh. The inhabitants belong to that curious class known as Nayaks, who are mentioned in the district account. They are very wealthy and own all the land round Haldwani, where they have fine houses and gardens. In consequence of the potato cultivation the assessable area of the patti has largely increased in the last thirty years. The revenue now stands at Rs. 1,955 for the two pattis of Malla and Talla Ramgarh, which have been assessed together. The expiring revenue was Rs. 1,291, which shows a great increase over the settlement of 1870, when the jama stood at Rs. 782, the difference being due to the potato fields, which came into existence subsequently. These have now been incorporated into the general assessable area with the exception of the Hartola Mahal in Talla Ramgarh, which is still assessed at the rate of two rupees an acre. In 1815 this patti was assessed at Rs. 440, rising to Rs. 567 in 1820 and Rs. 570 in 1843. Talla Ramgarh yielded Rs. 195 in 1815, Rs. 254 in 1820, Rs. 222 in 1843, and Rs. 247 in 1870. The population of Malla Ramgarh amounted to only 354 in March 1901, but at the preliminary census of October, 1900, the total was 1,344, of whom 688 were males and 656 females.

RAMGARH TALLA Patti, Pargana RAMGARH.

A small patti lying to the north of Malla Ramgarh and occupying the high land on the ridge of Hartola and the parallel ridge of Pathargarhi that lies between this and the Gagar heights. To the north is Kutauli Malli, to the east Agar, and to the west Dhaniyakot. The road from Naini Tal to Almora passes through the patti, between Ramgarh village and the pass of Nathua Khan running below the large village of Nayakana of the Malla patti. As in Malla Ramgarh, all the people betake themselves to the

Bhabar in the cold weather and rely much more on their estates there than on their hill villages for a livelihood. The potato fields of Hartola, however, constitute an important source of income and are assessed as a Government mahal at the rate of Rs. 2 per acre. The statistics of revenue will be found in the article on Malla Ramgarh. The population in 1901 amounted to 49 persons only at the time of the regular census.

RAMNAGAR, *Patti* KOTAH BHABAR, *Tahsil* HALDWANI.

This town, the chief market of the Kotah Bhabar, is situated at the foot of the hills and on the banks of the river Kosi, in latitude $29^{\circ} 23'$ north and longitude $79^{\circ} 9'$ east, at an elevation of 1,204 feet above the level of the sea. The town lies at a distance of 12 miles from Kotah, six miles from Dhikuli, 12 miles from Mohan, 20 miles from Seti, 36 miles from Khairna, and 56 miles from Almora. It is the greatest lowland mart of western Kumaun, as Haldwani is for midland and Tanakpur for eastern Kumaun. Through Ramnagar passes almost all the trade of the western hills, corn and chillies from Garhwal and Pali Pakhaon, and borax and wool brought by the Bhotiya traders. Several roads lead to Ramnagar. A fine cart-road from Almora and Ranikhet carries the bulk of the hill trade, being fed by many smaller bridle-roads leading from the interior; but perhaps of more importance is the main submontane road, constructed by, and called after, Sir Henry Ramsay, an unmetalled track along which passes a great part of the traffic from the eastern part of the district and Nepal to the Ganges. It is also largely used by pilgrims on their way to the great assemblies at Hardwar and by timber merchants for exporting the produce of the forests to the plains, and is continually crossed by roads leading into the hills direct from the plains. The extension of the railway to Ramnagar has for some time been among the first of the projects for new construction, and the line from Moradabad to this place will probably be built shortly.

Ramnagar possesses a police-station, a post-office, school, and two bungalows, of which one belongs to the Government Estates and the other to the Forest Department. The population in 1901 amounted to 4,038 persons, of whom 1,402 were

Musalmans. Consisting, as it does, of a very fluctuating population, these figures can only give an approximate idea of the number of inhabitants; but it is clear that the place has grown largely in the last twenty years, as the census of 1881 gave a total of only 3,096 persons. Before 1850 Chilkia was the principal mart for forest and hill produce, but it has since then quite given place to Ramnagar.

The town is administered under Act XX of 1856, and in the year 1901 all of the 622 houses in the town were assessed to taxation, the income from the house-tax yielding Rs. 1,024, with an incidence of Re. 1-10-5 per assessed house and Re. 0-3-0 per head of population. The total receipts for the same year under the various heads, chaukidari tax, conservancy tax, rents of stalls, sarai and slaughter-houses, and miscellaneous income amounted to Rs. 3,660, and of this Rs. 2,932 were expended, being chiefly devoted to police and conservancy. A large budget grant was made for improvements, which have not as yet been carried out. These improvements consist for the most part of street-paving and the erection of properly-built stalls for the market.

An important system of canals has its head-work at Ramnagar and irrigates a large tract of land in the Bhabar. There were at one time threatened by the Kosi, which began to cut into the right bank under Ramnagar, but extensive protective works have been constructed with complete success up to date.

RANIBAGH, *Patti CHHAKHATA PAHAR,*
Pargana CHHAKHATA.

A village near the foot of the hills on the road from Naini Tal to Kathgodam, in latitude $29^{\circ} 17'$ north and longitude $79^{\circ} 33'$ east, at a distance of about three miles from the latter, at the junction of the cart and bridle-roads from Naini Tal and the bridle-road from Bhim Tal and Almora. It stands on the banks of the Ballia river, which is spanned by an iron suspension bridge over which the road leads to Bhim Tal. It contains a dāk-bungalow, a small bazār, consisting of a few shops on either side of the Almora road, and an encamping-ground between the bazār and the cart-road. The place is used as a rest-camp for troops and as a halting place for traders on their way to and

from the hill markets. A considerable fair takes place here on the Makar Sankrant, which corresponds to the 12th or 13th of January in each year. The population of Ramibagh at the last census numbered 641 persons, of whom 592 were Hindus, 46 Musalmans and six Christians. The permanent residents are comparatively very few. The place is administered in conjunction with Kathgodam (*q. v.*) as a town under Act XX of 1856.

RUDARPUR, *Pargana* RUDARPUR, *Tahsíl* KICHHA.

This village, from which the pargana takes its name, and which in former days was the headquarters of a tahsíl, lies on the main Tarai road, in latitude $28^{\circ} 58'$ north and longitude $79^{\circ} 25'$ east, at a distance of eight miles west from Kichha, ten miles from Gadarpur, 20 miles from Haldwani and 26 miles from Rampur, with all of which places it has direct road communication. It contains a police outpost, attached to the Kichha station, an imperial post-office, a market held twice a week on Sundays and Thursdays, and a liquor shop. There is a canal bungalow here and also an Estates bungalow, located in the old tahsíl building, which lies within the limits of the village of Rampur to the east. A fair takes place here annually in the month of Chait. The population in 1901 numbered 592 persons, of whom 262 were Musalmans.

Rudarpur was once a place of considerable importance. It derives its name from Raja Rudra Chand of Kumaun, who founded it about 1588. From that date onwards Rudarpur was generally the capital of the Tarai, and frequently figures in its history. It remained a place of some importance till the beginning of the nineteenth century. Captain Jones in his report on the canal irrigation of Rohilkhand in 1843 writes: "It was some years ago a very large and populous village; it is situated on rather elevated ground, with a clear and rapid river, the Bahgul, flowing through it. It is now almost deserted; the ruined and empty huts bear a proportion of three to one to those inhabited it is in contemplation to remove the thana to the southwards, the mortality among the police being so considerable." The cause of this was that Sheoraj Singh of Kashipur had made a dam over the Bahgul about three miles above Rudarpur with the res t

that the country in the vicinity of the town was completely flooded. Also below the village, the Nawab of Rampur had made another dam, creating a large swamp in the very middle of the site. Captain Jones set about to remedy this and Rudarpur recovered to some extent, but it again decreased in population and importance after the removal of tahsíl headquarters to Kichha. The only remnants of its former greatness are a few *sati* monuments, some small temples, and four or five dilapidated wells, as well as the scanty remains of a small earthen fort.

RUDARPUR Pargana, Tahsíl KICHHA.

This is the central pargana of the Tarai, lying between Gadarpur on the west and Kilpuri on the east. On the north it is bounded by the Chhakhata Bhabar and on the south by the Bilaspur tahsíl of the Rampur State and pargana Chaumabla of the Mirganj tahsíl in the Bareilly district. It is about twelve miles long and twelve miles wide: the northern portion west of the railway line, a strip of country about four miles wide, consists of reserved forest. It has a total area of 77,906 acres, or nearly 122 square miles, and contains 77 villages, of which three are revenue-free, three are held in zamindari tenure, and the remainder are under direct management. The most important place is Kichha, the headquarters of the Tarai tahsíl and the residence of the tahsildar as well as the peshkar of the pargana. Other large villages are Rudarpur, Darao, Chhinki, Bara and Sahdaura. The eastern half of the pargana is traversed from north to south by the Rohilkhand and Kumaun railway with a station at Kichha, while parallel to this runs the metalled road from Bareilly to Haldwani and Naini Tal. This road is crossed at Kichha by the main Tarai road from Kashipur, which passes through Rudarpur and at Kichha diverges into two branches, one leading direct through the forest to Sitarganj and the other going through the cultivated villages along the southern border. Another road runs through Rudarpur from Rampur to Haldwani, and a fourth connects Kichha with Darao. The markets are at Kichha, Rudarpur, Bara and Chukti. The population at the census of 1891 numbered 29,556 persons. At the following enumeration of 1901 the pargana contained 26 291 inhabitants of whom 14,425 were

males. Musalmans are very numerous, amounting to 11,528 persons, and are found in almost every village. They are chiefly Sheikhs and Pathans. The Hindus are mostly Kurmis, Chamars, Ahirs and Bhuksas.

As compared with the rest of the Tarai, this pargana is remarkable both for the density of the population and the large size of the villages. It lies higher than Gadarpur, and on the whole is more healthy. The chief rivers are the Dimri on the western boundary, the western Bahgul, the Baghaiya, the Madni, the Baror, the Kichha river and the eastern Bahgul on the extreme south-eastern boundary. All of these except the Kichha, which is a continuation of the Gola, and the eastern Bahgul, which is the name given here to the Sukhi, are Tarai streams which have their origin in the swamps to the north of the pargana. The total cultivated area in 1902 was 27,013 acres or somewhat over 34 per cent. of the whole. The kharif is the more important harvest, covering on an average some 22,000 acres; but there is a large rabi area amounting to nearly 20,000 acres. Rice is the staple crop, but except in the west a very fair proportion of the kharif consists of the millets, while east of the Kichha more than half is occupied by maize and juar.

The pargana at the last settlement was divided into seven circles. The first consists of eight villages lying between the Dimri and the Bahgul, a lowlying and sparsely cultivated tract watered from the two rivers. All the cultivation is in the midst of heavy grass jungle, and consequently all the villages were assessed at four annas per *bigha* only, except Baghwala and Rampura, where the rate in places rises to six annas. The second tract comprises five villages between the Bahgul and the Baghaiya. The northern portion is cultivated by Bhuksas and Banjaras, who pay the ordinary rate of four annas six pies. To the south cultivation improves and the rent rises to six annas in Malsi, a very fine village. The third tract lies between the Baghaiya and Barai streams, and contains only three villages, fairly irrigated, and paying a rent ranging from four to five and a half annas. The fourth tract between the Barai and Madni contains four villages of which Lohari lies in the middle of heavy jungle and pays the low rate of three annas

six pies, while the others are well cultivated and irrigated from the Barai and pay somewhat higher rents. Between the Madni and Baror there are twelve villages, fairly well irrigated; the rates are lower in the north than in the south, rising in the latter to six annas. The sixth tract between the Baror and the Kichha comprises the large villages irrigated by the Paha canal of the Rohilkhand division. As elsewhere, the rents are higher in the south than in the north, and Chhinki, a particularly fine village, pays seven annas, as also does the central portion of Kichha itself, which consists of very fertile land. The last tract lying east of the Kichha is unirrigated, but it is the best portion of the pargana. It stands high and is much more healthy than the rest; the villages are more settled and more like ordinary plains villages than any others in the Tarai. The four villages lying east of the Dhura are the best and pay a rate of seven annas, while the remainder to the north of the tract and close to the jungle are more leniently treated.

Like Bazpur the pargana suffered a few years ago from depression, but has now completely recovered. The revenue in 1902 amounted to Rs. 59,455, whereas in 1895 it had fallen as low as Rs. 38,857, but since that date it has been constantly on the increase. The irrigation system of the pargana has been dealt with in the general account in Chapter II.

SAT TAL, *Patti and Pargana CHHAKHATA.*

A collection of lakes lying in latitude $29^{\circ} 21'$ north and longitude $79^{\circ} 33'$ east, at a distance of about nine miles south-east of Naini Tal and three miles from Bhim Tal. They are approached by small paths from Bhim Tal and from the Ramgarh road at Bhowali. These lakes, which at one time were seven in number, as their name implies, are the most picturesque of all the lakes in this district. Their formation is due to landslips in the basin of the range in which they lie. The first lake met with is a deep black tarn, wooded down to the water's edge and connected by an underground channel with the fourth. Passing further into the basin a second very small pool is met with, close to the third at the irrigation embankment, thence the path winds round

the third to the fourth, which is the largest and is a very considerable sheet of water, about 1,100 yards in length and 350 in breadth. Below the embankment to the south is another small lake, the fifth, and beyond this in the bed of the stream are two small lakes now dried up. All the three larger lakes communicate with each other and the water-level has been raised considerably by the embankment which makes these lakes a reservoir for the supply of water to the Bhabar during the dry season from February onwards. This dam was constructed by Sir Henry Ramsay in 1869. It is a short earthen embankment 24 feet wide on the top, revetted half way down with dry stone pitching. Through the centre of the embankment runs a wall built of masonry in clay. The outlet is a tunnel through the highest portion of the dam, closed by a small iron sluice which is worked from above. When the outlet is closed the two lower lakes, known as Sita Tal and Ram Tal, become one, although the nominal level of the latter is nine feet higher than that of the former. The escape water joins the Ballia stream, which runs from Naini Tal, and eventually at a distance of a mile and a half further down flows into the Gola.

SIMALKHA *Patti*, *Pargana* DHANIYAKOT.

A small patti on the south bank of the Kosi lying east of Uchakot, which it greatly resembles. To the east lies Dhaniyakot and to the south Kotah Malla and Talla. It runs up from the Kosi on the north to the forest-clad ridge of Binaik-dhura. The only village of any size is Simalkha, which is situated on the river bank. It is included in one patwari circle with Uchakot and Dhaniyakot. The inhabitants are chiefly Boras and are very prosperous, as besides having excellent land here they not only carry on a considerable amount of cultivation in the Bhabar, but also take part in the grain traffic with Ranikhet. The total population in 1901 was 369 in March, but in the previous October there were 668 persons in the patti, many of whom left for the Bhabar in the cold weather. The land revenue in 1815 amounted to Rs. 241, and rose in 1820 to Rs. 346 and to Rs. 367 in 1843. In 1870 it was fixed at Rs. 360 and a further reduction of Rs. 25 was made in 1880 on account of

the damage done by the floods on the Kosi. It now stands at Rs. 410, with an incidence of Re. 0-14-9 per soil unit or *bisi* of second class *uparaun* land. Chillies are largely grown in the warm riparian lands of this patti and Uchakot, and form a valuable item in the income of the cultivators.

SITARGANJ, *Pargana KILPURI, Tahsil KICHHA.*

A small market village of the Tarai situated in latitude $28^{\circ} 56'$ north and longitude $79^{\circ} 43'$ east, on the main road running from Tanakpur to Kashipur, at a distance of 18 miles from Khatima, 22 miles from Pilibh t, 14 miles from Kichha, 23 miles from Haldwani and 14 miles from Chorgallia, with all of which it is connected by unmetalled roads. It was formerly the headquarters of a tahsil and is now the capital of the Kilpuri pargana. There is a police-station here as well as a postal sub-office, dispensary, and the tahsil buildings, the headquarters of the peshkar. In the village are two bungalows, one belonging to the Government Estates, standing in a good garden, and the other to the Rohilkhand Canals. The village of Sitarganj is a very unhealthy place. The population in 1901 numbered only 118, of whom 33 were Musalmans, Rains by caste. There is an outstill and liquor shop here.

SULTANPUR, *Pargana BAZPUR, Tahsil KICHHA.*

A large village on the south-western boundary of the pargana, lying in latitude $29^{\circ} 9'$ north and longitude $79^{\circ} 4'$ east, a short distance east of the Kosi river and on the north side of the main Tarai road from Kichha to Kashipur, at a distance of five miles west from Bazpur. It is the largest and most prosperous village of the whole Tarai, and the cultivation in its neighbourhood is very good. The assessment here is nine annas per *bigha* which, though an enhanced rate, is met with ease. The population at the last census was 2,073 persons, of whom 818 were Musalmans. This figure shows a considerable decrease during the past ten years, for in 1891 the number of inhabitants was 2,670. Bazpur contains a police outpost of the Bazpur station and a liquor shop. Markets are held here weekly, on W ya. At this point the road, which from Melaghat

westwards is managed by the Tarai authorities, passes for the rest of its length into the hands of the Public Works Department.

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UCHAKOT Patti, Pargana DHANIYAKOT.

This patti greatly resembles Simalkha, with which it forms one homogeneous tract. It lies south of the Kosi river, which separates it from Chauthan and Kosyan Malla between Simalkha on the east and Kosyan Talla on the west. To the south it stretches up to the oak forests of the Binaik-dhura ridge, marching with Kotah Malla and Talla. The slopes of this ridge are very steep in the upper portions, but trend gradually down for about 3,000 feet in gentle terraces to the Kosi. Most of the patti consists of forest, the 29 villages being chiefly confined to the Kosi valley, where is much good land with ample means of irrigation and producing the best crops in the district. The people are in very flourishing circumstances and are for the most part of a good class, belonging to the Bora clan. The largest villages are Mallagaon, Tallagaon and Dadima. In the first-named there is a well-known family of Chakrayats, who own large estates in the Kosi valley and in the Bhabar. The patwari has jurisdiction also over Dhanियakot and Simalkha and resides in Mallagaon, and there is a school in the same village. Access to Naini Tal is obtained either by the Ranikhet cart-road or by the road to Kilberry and Ratighat. Ranikhet is equally easy of approach from this patti, and the inhabitants derive considerable profit from the proximity of both these places. The assessment in 1815 was Rs. 1,022, rising to Rs. 1,380 in 1820 and to Rs. 1,530 in 1843. At Mr. Beckett's settlement it was fixed at Rs. 2,279, but of this Rs. 403 were remitted on account of diluvion in 1880. The present demand is Rs. 2,713, with an incidence of Rs. 0-14-9 per *bisi* of second class *uparawn* land, the soil unit of the settlement. The population in 1901 numbered 2,110 at the regular census and 2,893 at the preliminary enumeration of October, 1900. Of the latter 1,495 were males and 1,398 females.

GAZETTEER
OF
NAINI TAL.

APPENDIX.

GAZETTEER

OF

NAINITAL.

APPENDIX.

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APPENDIX

1

Tahsil		Persons.		Males.		Females.		Persons.		Males.		Females.	
		2	3	4	5	6	7	8	9	10	11	12	13
1		2	3	4	5	6	7	8	9	10	11	12	13
Nal Tal	...	43,788	25,140	18,538	40,637	23,143	17,488	1,972	1,405	557	1,129	586	548
Bhabar	...	93,445	53,070	40,375	82,681	46,385	36,296	10,399	6,459	3,940	865	226	139
Kash pur	...	55,632	29,840	25,792	34,314	18,387	15,927	21,107	11,380	9,777	211	123	88
Tara	...	118,422	64,920	53,502	75,825	41,446	34,379	42,510	23,420	19,090	87	54	33
Total	...	311,237	172,970	138,287	233,457	139,367	104,090	75,988	42,614	33,374	1,792	989	803

TABLE II.—Population by *Idams*, 1901.

Serial num-ber.	Name of thána.	Total population.			Hindus.			Muslimans			Others.		
		Persons.	Males.	Females.	Persons.	Males.	Females.	Persons.	Males.	Females.	Per-sons.	Males.	Fe-males.
1	Naini Tal	6,903	4,721	2,182	4,857	3,354	1,503	1,311	991	360	735	418	310
2	Naini Tal Cantonments	706	527	179	491	402	89	104	63	41	111	62	49
3	Pargana Chhaikhata	7,914	4,634	3,280	7,291	4,278	3,013	378	266	112	243	90	155
4	Do. Dhanyakot	10,588	5,701	4,887	10,330	5,670	4,660	56	23	31	4	2	2
5	Do. Ramgarh	1,270	744	526	1,248	728	520	20	8	12	11	8	3
6	Do. Dhyaitau	7,364	3,793	3,571	7,262	3,702	3,560	2	1	1	...	...	...
7	Do. Kotah	4,788	2,712	2,076	4,753	2,690	2,063	23	66	7	12	6	6
8	Do. Kutanli	2,200	1,042	1,158	2,199	1,047	1,152	...	...	...	1	1	...
9	Do. Mahruri	1,991	1,266	725	1,897	1,194	703	84	16	13	10	1	9
10	Total Naini Tal Pesh-kari.	36,129	19,892	16,237	33,259	19,400	13,856	557	301	166	283	108	175
11	Haldwani	42,119	23,726	18,393	27,886	21,123	16,768	4,045	2,464	1,581	188	109	79
12	Kaladkungi	26,732	15,318	11,414	24,910	13,919	10,601	2,093	1,374	709	39	25	14
13	Ramnagar	24,591	14,026	10,569	23,185	11,343	8,842	1,271	2,591	1,680	138	92	46
14	Kashipur	32,738	17,262	13,476	19,467	10,132	9,035	13,515	7,038	6,417	56	32	24
15	Jaspur	22,894	12,578	10,316	15,147	8,255	6,892	7,592	4,232	3,360	155	91	64
16	Bazpur	27,132	14,732	12,400	19,676	7,400	6,276	13,450	7,326	6,124	6	6	...
17	Gadarpur	14,723	8,246	6,477	0,169	3,401	2,689	8,549	4,775	3,774	14	10	4
18	Kichla	26,291	14,425	11,866	14,755	8,247	6,508	11,528	6,170	5,358	8	8	...
19	Sitarganj	26,916	14,246	11,671	18,443	10,098	8,345	7,453	4,139	3,314	20	8	12
20	Khatima	24,360	13,272	11,083	22,791	12,240	10,551	1,530	1,010	520	39	22	17

TABLE III.—*Vital Statistics.*

Year.	Births.				Deaths.			
	Total.	Males.	Fe- males.	Rate per 1,000.	Total.	Males.	Fe- males	Rate per 1,000.
1	2	3	4	5	6	7	8	9
1891	7,512	3,957	3,555	35.82	8,782	4,771	4,011	41.71*
1892	10,045	5,373	4,672	27.73	13,963	10,335	3,628	52.35
1893	10,822	5,680	5,142	29.87	13,199	7,184	6,015	36.44
1894	9,899	5,247	4,652	27.32	18,132	9,753	8,379	50.05
1895	9,133	4,741	4,392	25.21	15,784	8,466	7,318	43.57
1896	8,009	4,124	3,885	22.11	19,158	10,324	8,834	52.89
1897	8,933	4,837	4,096	25.03	13,356	7,269	6,087	37.42
1898	10,374	5,394	4,980	29.07	14,842	8,124	6,718	41.59
1899	10,019	5,350	4,669	28.07	14,130	7,777	6,353	39.59
1900	10,513	5,519	5,024	† 29.54	11,921	6,413	5,508	33.40†
1901	10,011	5,242	4,769	32.16	11,378	6,117	5,261	36.56
1902	10,928	5,722	5,206	35.11	13,625	7,267	6,358	43.73
1903								
1904								
1905								
1906								
1907								
1908								
1909								
1910								
1911								
1912								
1913								
1914								

* The figures for 1891 are those for the old Tara district only

† The rates from 1891 to 1900 are calculated from the returns of the 1891 census

TABLE IV.—Deaths according to cause

Year.		Total deaths from—			
		All causes.	Plague.	Cholera	Small pox
1		2	3	4	5
1891	...	8,782	...	155	35
1892	...	18,963	...	2,563	74
1893	...	13,199	...	21	160
1894	...	18,132	...	91	93
1895	...	15,784	.	.	28
1896	...	19,158	.	1,485	15
1897	...	13,356	...	205	105
1898	...	14,842	...	10	8
1899	...	14,130	...	30	2
1900	...	11,921	...	2	.
1901	...	11,378	...	70	2
1902	...	13,623	.	555	3
1903	...				
1904	...				
1905	...				
1906	...				
1907	...				
1908	...				
1909	...				
1910	...				
1911	...				
1912	...				
1913	...				
9 14	..				

APPENDIX

Pargana and tahsil	Waste acres +	3	4	Total	Canal.	Wells.	Tanks.	Other sources.	Dry	Total	cropped
I	2	3	4	5	6	7	8	9	10	11	12
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Chhakhata	6,097	852	1,527	563	...	...	...	553	3,125	8,688	...
Kotah	4,027	229	956	339	...	...	...	339	2,503	2,812	...
Dhaniyakot	10,432	1,669	1,561	1,299	...	...	...	1,299	5,503	6,502	...
Dhyanirau	14,702	1,736	3,058	555	...	...	...	565	9,343	9,908	...
Raungarh	4,542	855	1,309	2	...	...	...	2	2,836	2,833	...
Katauli	5,173	124	1,724	91	...	...	...	91	3,164	3,255	...
Mahruri	4,409	400	1,331	41	...	...	...	41	2,637	2,678	...
Total, Tahsil Naini Tal	49,382	5,505	11,866	2,900	...	...	...	2,900	29,111	32,011	...
Chaubhainsi Bhabar	3,379	111	1,406	1,572	1,572	...	...	...	290	1,862	1,248
Chhakhata Bhabar	30,683	1,269	6,275	23,105	23,105	...	...	...	34	23,139	8,881
Kotah Bhabar	23,773	1,715	7,173	14,730	13,706	...	...	1,024	155	14,885	9,308
Chilkja	24,754	1,966	5,765	17,023	14,573	...	...	2,450	...	17,023	11,314
Total Bhabar	82,589	5,061	20,619	56,430	52,956	...	...	3,474	479	56,909	30,751
Bazpur	72,055	7,263	36,742	5,983	5,964	19	...	...	22,062	28,045	14,430
Gadarpur	71,965	5,336	50,713	9,483	9,474	9	...	...	6,433	15,916	6,068
Radarapur	77,906	5,544	45,349	9,108	9,104	4	...	...	17,905	27,013	14,325
Kilpur	80,567	5,454	61,930	4,059	4,059	...	...	...	9,215	13,274	6,822
Nanaknata	51,186	4,498	25,108	1,198	1,198	...	...	...	20,337	21,535	6,212
Bilheri	140,706	5,043	101,179	470	...	...	...	470	34,014	34,484	9,436
Total Tarai	404,435	38,138	321,030	30,301	29,799	32	...	470	109,963	140,267	57,299
Kashipur	121,054	9,962	67,481	6,536	6,348	88	98	2	87,075	43,611	12,862
	...	...	...	...	...	120	98	6,846	176,631	272,798	100,912

Nami Tal^{yy} District.

Year.		Rabi							Kharif			
		Total.	Wheat.	Lahi	Burley	Gram. and masur.	Tobacco	Total.	Rice.	Maize	Mandua	Sugar- cane.
1805	...	22,646	10,101	8,947	1,895	1,210	129	13,152	9,999	275	770	67
1806	...	24,967	11,634	9,308	2,085	1,391	141	12,382	10,161	452	755	89
1807	...	24,926	11,293	9,517	2,113	1,325	139	13,061	10,252	278	1,008	87
1808	...	27,977	13,035	10,816	2,116	1,461	140	14,544	11,855	459	733	89
1809	...	28,852	13,027	11,436	2,162	1,640	130	15,294	11,928	289	955	67
1810	...	28,732	12,902	11,758	2,081	1,539	178	15,373	12,285	293	979	94
1811
1812
1813
1814
1815
1816
1817
1818
1819
1820
1821

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Name Tal District

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TABLE VIII.—Cognizable crime.

Year.	Number of cases investigated by police—			Number Tried
	<i>Suo motu.</i>	By orders of Magistrate.	Sent up for trial.	
1	2	3	4	5
1898	868	...	616	804
1899	859	...	682	972
1900	783	..	605	810
1901	561	..	443	522
1902	586	...	412	523
1903	599		588	545
1904				
1905				
1906				
1907				
1908				
1909				
1910				
1911				
1912				
1913				

NOTE.—Columns 2 and 3 should show cases instituted du

K.—Revenue Demand at Successive Settlements.

Ra	Year of Settlement.						
	1815.	1820.	1828.	1832	1843.	1863.	1900.
<i>Pattis.</i>	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
...	1,520	1,699	2,144	2,204	2,204	4,008	6,356
...	2,069	1,831	2,139	2,144	2,122	2,894	3,985
...	3,938	6,134	6,457	6,538	6,616	9,412	12,922
...	1,944	1,969	1,901	1,912	1,914	2,304	4,653
...	4,076	5,425	6,052	6,193	6,256	10,534	12,180
...	1,467	1,518	1,518	1,518	2,907	3,833	5,150
...	878	878	878	878	1,323	2,898	3,911
...	15,892	19,454	21,089	21,384	23,342	34,893	49,157

a1	Year of Settlement.						
	1815.	1820.	1828.	1832.	1843	1889.†	1903.
	Rs	Rs	Rs	Rs.	Rs.	Rs.	Rs.
Revenue	123	808	1,628	2,054	2,892	22,128	24,711
Rent ...	...	...	...	...	...	57,386	79,127
Revenue	...	184	909	949	815	...	...
Rent ...	...	...	...	...	...	5,544	6,215
Revenue	1,062	3,182	4,392	4,707	4,802	23,641	25,492
Rent ..	...	...	...	...	...	33,158	37,657
Revenue	...	...	...	...	4,055	5,597	6,889
Rent ..	...	...	...	...	...	48,912	62,479
Revenue	1,155	4,174	6,924	7,710	12,654	51,366	56,592
Rent ..	...	...	...	...	...	1,45,000	1,85,478

ma	Year of Settlement			
	1803.	1815.	1843	1885.
<i>Tarai ‡</i>	Rs.	Rs.	Rs	Rs
..	33,000	60,000	22,461	19,463
...	16,000	32,000	5,806	5,806
..	...	...	20,061	20,061
...	...	...	4,627	4,627
...	...	...	9,406	11,700
...	...	...	7,899	7,899
Total	48,000	92,000	70,263	69,656

ana	Year of Settlement.			
	1889 §	1879.		
<i>Cashpur.</i>	Rs	Rs.		
...	1,02,367	1,05,388	...	.

y assessed, the whole revenue being assigned.
 led figures for the assessments of 1864, 1869 and 1879 are not
 le The totals are given in Chapter IV
 res are for settled revenue only, and do not include rents, for
 ee Table X
 re several previous settlements in Moradabad, but details are
 lab e

TABLE X.—Present demand for revenue and cesses for the year 1309 Fasli.

Pargana and tahsil.	Where included in <i>Ain-i-Akbari</i> .		Revenue.	Cesses.	Total	Incidence per acre.	
	1	2	3	4	5	Cultivated	Total.
						6	7
Chhakhata	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Kotah	3,966 2 8	660 5 7	4,626 7 10	0 14 3	1 0 10
Damniyakot	2,845 4 0	457 1 8	3,302 5 8	1 0 8	1 2 9
Ramgarh	7,897 8 9	1,491 14 7	9,319 7 4	1 0 3	1 3 2
Dhyanirau	2,343 0 0	386 11 0	2,729 11 0	0 14 2	1 0 6
Katauli	8,002 14 0	1,358 10 0	9,361 8 0	1 0 11	1 2 11
Mahruri	892 0 9	542 8 3	1,434 4 0	0 15 0	1 1 6
Total tahsil Narni Tal*	12 0 0	324 0 3	336 6 3	0 12 3	0 14 4
Chhakhata Bhabar	25,948 18 9	5,101 4 4	31,110 2 1		
C subhainsi Bhabar	84,913 2 10	2,525 15 1	87,439 1 11	3 12 6	2 13 7
Kotah Bhabar...	5,372 10 3	160 12 2	5,538 6 5	2 15 6	1 0 8
Chit kia	56,737 12 4	1,701 9 9	58,439 6 1	3 14 9	2 7 4
	56,324 0 6	1,889 10 11	60,213 11 5	3 8 7	2 6 11
Total Bhabar†	2,05,347 9 11	6,277 15 11	2,11,625 9 10	3 11 6	2 9 0
Bhapur	..	Mundia	63,589 3 3	...	63,589 3 3	2 4 3	0 14 1
Gadarpur	..	Gadarpur	32,264 7 0	34 10 5	32,299 1 5	2 0 5	0 7 2
Rudarpur	..	Bhaksar	53,136 0 0	169 14 9	53,305 14 9	1 15 5	0 10 11
Kapri	..	Ditto	25,148 5 0	12 0 0	25,160 5 0	0 14 4	0 4 11
Nanakmata	..	Bakhshi	18,366 14 0	1,449 10 9	14,816 8 9	0 9 11	0 4 2
Bharvi	..	Chunki	60,662 5 3	20 11 11	60,683 1 2	1 12 2	0 6 10

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TABLE XII.—*Stamps.*

Year.	Receipts from—		
	Non-judicial.	Court-fee including copies.	All sources.
1	2	3	4
	Rs.	Rs	Rs
1890-91	3,957	7,383	11,355
1891-92	8,650	14,241	23,005
1892-93	13,838	26,127	40,041
1893-94	14,289	26,737	41,214
1894-95	13,773	23,624	38,440
1895-96	13,598	22,322	36,850
1896-97	13,671	25,227	38,978
1897-98	13,964	26,062	40,295
1898-99	14,673	23,172	38,540
1899-1900	13,221	26,911	40,692
1900-1901	15,176	23,744	39,366
1901-1902	15,952	28,000	44,358
1902-1903 ,			
1903-1904			
1904-1905... ..			
1905-1906... ..			
1906-1907... ..			
1907-1908... ..			
1908-1909... ..			
1909-10			
1910-11			
1911-12			
1912-13			

APPENDIX

XVII

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TABLE XIV.—*Income-tax by tahsils (Part IV on*

Year.	Tahsil Naini Tal				Year.	Tahsil	
	Under Rs 2,000		Over Rs. 2,000			Under Rs. 2,000	
	Assessee	Tax.	Assessee	Tax		Assessee.	Tax
		Rs.		Rs.			Rs
1898-1899 ..	127	2,380	34	3,443	1898-1899 ...	117	1,652
1899-1900 ...	128	2,334	32	2,954	1899-1900 ...	106	1,702
1900-1901 ...	119	2,280	38	3,560	1900-1901 ...	98	1,501
1901-1902 ...	120	2,179	38	3,459	1901-1902 ...	96	1,527
1902-1903 ...	131	2,219	37	3,384	1902-1903 ...	85	1,528
1903-1904 ...					1903-1904 ...		
1904-1905 ...					1904-1905 ...		
1905-1906 ...					1905-1906 .		
1906-1907 ...					1906-1907 ...		
1907-1908					1907-1908 ...		
1908-1909 ...					1908-1909 ...		
1909-10 ...					1909-10 ...		
1910-11 ...					1910-11 ...		
1911-12 ...					1911-12 ...		
1912-13 ...					1912-13 ...		

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TABLE XIV.—*Income-tax by tahsils (Part IV only)*—(conclu

Year.	Tahsil Tarai.				Year.	Tahsil Kashyap			
	Under Rs. 2,000		Over Rs. 2,000.			Under Rs. 2,000.		0	
	Assessee.	Tax.	Assessee.	Tax.		Assessee.	Tax.	Assessee.	
									Rs.
1898-1899 ...	15	160	...	...	1898-1899 ...	129	2,182	9
1899-1900 ...	16	190	.	...	1899-1900 ...	124	2,258	9
1900-1901 ...	12	125	...	...	1900-1901 ..	124	2,110	16
1901-1902 ...	15	180	...	...	1901-1902 ...	116	2,086	17
1902-1903 ...	19	240	...	..	1902-1903	114	2,047	16
1903-1904 ..					1903-1904 ..				
1904-1905 ...					1904-1905 ...				
1905-1906 ...					1905-1906 ...				
1906-1907 ...					1906-1907 ...				
1907-1908 ...					1907-1908 ...				
1908-1909 ..					1908-1909 ...				
1909-10 ...					1909-10 ...				
1910-11 ...					1910-11 ...				
1911-12 ...					1911-12 ...				
1912-13 ...					1912-13 ...				

TABLE XV.—*District Board.*

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	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1890-91..	4,314	17,020	31,579	11,038	...	2,187	66,138	3,961	7,537	2,954	850	16,941	513	513	850	150	39,871	73,627
1891 92..	4,265	19,698	31,959	2,516	...	6,711	65,149	2,649	5,312	...	...	23,241	540	540	18,527	150	21,543	71,965
1892-93..	4,386	27,216	39,801	2,688	...	5,114	78,655	3,410	4,867	28,005	...	22,227	1,281	1,281	13,970	150	5,856	79,766
1893 94..	3,671	19,704	38,507	2,662	2,60,000	10,156	3,34,700	5,308	5,073	2,60,000	10,976	20,003	936	936	10,700	441	9,457	3,22,894
1894 95..	4,709	23,162	38,842	2,940	20,000	20,868	1,10,621	5,122	5,193	27,200	11,693	26,297	476	476	17,199	441	15,538	1,09,158
1895-96..	5,917	21,186	42,202	3,714	...	16,511	92,530	9,437	5,558	...	18,892	19,488	503	503	28,838	441	18,616	1,01,772
1896 97..	5,158	22,410	43,138	4,266	...	12,303	87,275	7,889	5,791	5,660	10,336	21,403	3,003	3,003	22,602	150	14,775	91,559
1897 98..	5,265	24,311	46,863	4,071	1,35,000	6,160	2,21,670	7,718	5,563	1,01,704	17,648	21,494	3,582	3,582	32,862	150	13,182	2,03,928
1898 99..	6,670	25,439	59,693	3,856	1,27,000	20,580	2,43,243	6,493	5,671	1,47,515	14,440	20,453	802	802	24,976	150	10,188	2,30,638
1899 900..	...	* 47,983	64,738	5,711	...	48,787	1,67,220	7,697	5,300	89,544	21,669	21,853	695	695	19,222	150	52,623	1,68,253
1900 1901..	...	67,411	57,072	6,028	...	4,670	1,35,176	13,535	5,405	7,641	36,067	20,850	1,512	1,512	13,871	422	15,449	1,14,752
1901 902..	...	67,083	62,851	6,136	...	4,930	1,41,000	14,160	6,258	6,560	35,150	22,882	6,016	6,016	20,105	422	39,168	1,50,710
1902-1903..	...	43,250	61,720	6,873	...	4,380	1,16,229	11,981	6,132	2,198	28,534	28,582	2,327	2,327	26,886	572	34,000	1,41,212
1903 1904..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1904- 905..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1905 1906..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
906- 907..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1907 908..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
908-1909..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1909 10..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1910 11..
911 2..
1912- 8..
19 3 4

* From this year water-rate is included

Na ni Tal District

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TABLE XVII.—*Distribution of Police, 1902.*

Thána.	Sub- Inspec- tors.	Head Con- stables.	Con- stables.	Muni- cipal Police.	Town Police.	Rural Police
1	2	3	4	5	6	7
Naini Tal (Malli Tal)	2	2	15	11	...	..
Naini Tal (Talli Tal).	1	8	15	11	...	
Haldwani ...	2	4	18	9	5	
Ramnagar .	1	1	9	...	9	
Kashipur ...	2	2	12	26	...	85
Jaspar ..	1	1	9	...	12	43
Bazpur ...	1	4	18	...	...
Gadarpur ...	1	1	9	...	..
Kichha ...	1	2	12	...	...
Sitarganj ...	1	2	12	...	...	...
Khatima ...	1	1	6	..	...
Total	14	23	130	87	26	128

TABLE XVIII.—*Education.*

Total.			Secondary education.			Primary education.		
Schools and colleges	Scholars.		Schools.	Scholars.		Schools.	Scholars.	
	Males	Fe- males.		Males.	Fe- males.		Males	Fe- males.
2	3	4	5	6	7	8	9	10
52	1,713	239	12	694	239	40	1,019	...
56	1,741	223	13	759	216	42	952	...
57	1,594	291	14	761	297	42	833	...
80	2,032	293	14	803	281	61	1,182	...
78	1,964	276	13	706	252	60	1,225	10
87	2,112	306	14	337	145	68	1,712	142

Narn Tal District

List of Schools, 1903.

I.—SECONDARY.

Locality.	School.	Class.
Naini Tal.	A.—Boys' Schools, European.	
	St. Joseph's Seminary ...	High School ..
	Diocesan High School ...	Ditto ...
	Oak Openings School ...	Ditto ...
	The Priory ...	Ditto ...
	The Hermitage ...	Ditto ...
Naini Tal.	B.—Girls' Schools, European.	
	All Saints' Diocesan ...	High School ..
	Wellesley School ...	Ditto ..
	St. Mary's Convent ...	Ditto ..
	Petersfield ...	Ditto ...
Naini Tal.	C.—Anglo-Vernacular and Vernacular Schools.	
	Diamond Jubilee School ...	High School, Aided.
	American Mission School	Ditto ...
Kashipur	Municipal Anglo-Vernacular School.	Middle School...
Jaspur...	Tahsili School ...	Ditto ...
Ha	American Mission School	Ditto

List of Schools, 1903—(continued).

II — PRIMARY.

Village.	Class.	Average attendance.	Remarks.
Bhima Tal ...	Upper Primary	45	Migrates to Kunwarpur.
Ganja ...	Lower Primary	34	Permanent.
Reunsil ...	Ditto ...	16	Migrates to Khera.
Pandegaon ...	Ditto .	7	Temporary.
Banna ...	Lower Aided .	20	Permanent.
Ganghagaon,...	Ditto ...	24	Migrates to Phulchaur.
Baliyuti ...	Ditto ...	23	Migrates to D a m u a - dhunya.
Khurpa Tal, Gagar ...	Lower Primary	20	Permanent.
	Ditto	13	Migrates to Kamola.
Majhera ...	Upper Primary	24	Permanent.
Siti ...	Lower Primary	26	Ditto.
Uchakot ...	Ditto	26	Ditto.
Simalkha ...	Ditto	43	Ditto.
Dhanyakot ...	Ditto	19	Ditto.
Padli ...	Ditto	20	Migrates to Somachaur.
Ninglat ...	Ditto	22	Migrates to Chakalna.
Lohali ...	Ditto	21	Migrates to Ratanpur.
Raunchen ..	Ditto	14	Migrates to Laldhang.
Ranibagh ...	Ditto	10	Migrates to Kania.
Binakot ...	Lower Aided	28	Permanent.
Betalghat ...	Ditto	22	Ditto.
Shimel ...	Upper Primary	43	Ditto.
Manarsa ...	Lower Primary	8	Ditto.
Kul ...	Ditto	18	Ditto.
Monua ...	Ditto	22	Ditto.
Kaatiagarh ...	Ditto	11	Ditto.
Singauli ...	Ditto	35	Migrates to Belparao.
Dhari ...	Upper Primary	15	Migrates to Kishanpur.
Sitauli (Peora),	Ditto	38	Migrates to Motahaldn.
Kurai ...	Lower Primary	18	Migrates to Hathikhal.
Luesal ...	Ditto	39	Migrates to Kalakhunt.
Cheorigarh ...	Ditto	22	Migrates to Daulatpur.
Nadgal ...	Ditto	7	Migrates to Chorgallia.
Babiarh ...	Ditto	15	Migrates to Hairakhan.

Nainital District

List of Schools, 1903—(continued).

II.—PRIMARY—(continued).

Pargana.	Village.	Class.	Average attendance.	Remarks.
Dhyani- ran— (con- tinued).	Hairakhan ...	Lower Primary	8	Migrates from Babiarih.
	Gargari ..	Ditto	22	Temporary.
	Tusar ...	Ditto	12	Ditto.
	Jasynra ...	Ditto	13	Ditto.
	Ramgarh Malla	Ditto	9	Ditto.
Ramgarh	Ramgarh Talla,	Ditto	28	Migrates to Dewalchaur
	Pachhiltanda...	Ditto	14	Migrates to Katgaria.
	Basgaon ...	Ditto	13	Temporary.
	Supi ...	Ditto	7	Ditto.
Chhak- hata Bhabar.	Kanwarpur ...	Upper Primary	42	Migrates from Bhim Tal.
	Motahaldi ...	Ditto	43	Migrates from Sitauli.
	Kishanpur ...	Ditto	35	Migrates from Dhari.
	Dewalchaur ...	Lower Primary	22	Migrates from Ramgarh.
	Khera ...	Ditto	20	Migrates from Reonsil.
	Lanachaur ...	Ditto	31	Migrates from Padh.
	Hathikhali ...	Ditto	27	Migrates from Kurai
	Daulatpur ...	Ditto	34	Migrates from Cheorigarh.
	Katgaria ...	Ditto	38	Migrates from Pachhiltanda.
	Ratanpur ...	Ditto	20	Migrates from Lohali.
	Kamola ...	Ditto	23	Migrates from Bugar.
	Kalakhand ...	Ditto	12	Migrates from Luasal.
	Fatchpur ...	Ditto	18	Temporary.
	Kaladhungi ...	Ditto	16	Ditto.
Chha- bhainsi Bhabar.	Phulchaur ...	Lower Aided	21	Migrates from Ganghagaon.
	Damuadhunga,	Ditto	21	Migrates from Ballyuti
	Chorgallia ...	Ditto	48	Migrates from Nudgal.
	Kotah ...	Upper Primary	33	Permanent.
	Belpokhra ...	Ditto	18	Migrates from Chapar.*
	Dhakuli ...	Ditto	30	Migrates from Pajana.*

* In the Almora district.

List of Schools, 1903—(concluded).

II.—PRIMARY—(concluded).

Village.	Class.	Average attendance.	Remarks.
Bajaunia Haldu	Lower Primary	18	Permanent.
Pandegaon ...	Ditto	25	Ditto.
Patkot ...	Ditto	7	Ditto.
Debirampur ...	Ditto	16	Ditto.
Belparao ...	Ditto	34	Migrates from Singauli.
Ramnagar ...	Ditto	20	Temporary.
Dhula ...	Upper Primary	17	Migrates from Siuni.*
Basai ...	Ditto	29	Permanent.
Laldhang ...	Lower Primary	11	Migrates from Riunchen.
Kania ...	Ditto	6	Migrates from Ranibagh.
Kalanpur Tanda	Ditto	14	Temporary.
Raipur ..	Ditto	25†	
Sanyasiwala ...	Ditto	12	
Mahadabra ...	Ditto	24	
Dehipura ...	Ditto	24	
Angadpur ...	Ditto	23	
Maheshpura ...	Ditto	33	
Banskhera ...	Ditto	21	
Mundia ...	Ditto	16	
Kalakhera ...	Ditto	22	
Banskhera ...	Upper Primary	16	
Kichha ...	Lower Primary	19	
Ajitpur ...	Ditto	13	
Bhaga ...	Ditto	10	
Sisauana ...	Ditto	19	
Sisai ...	Ditto	16	
Basgar ...	Ditto	23	
Andali ...	Ditto	12	
Sunkhari ...	Ditto	16	
Bichna ...	Ditto	20	
Mainajhundi ...	Lower Aided	20	
Sarkara ...	Ditto	22	
Majhaua ...	Upper Primary	23	
Khatima ...	Lower Primary	22	
Nadauna ...	Ditto	18	
Kutra ...	Ditto	21	
Deori ...	Ditto	19	
Pholaiya ...	Ditto	20	
Chambeta ...	Ditto	16	
Patpara ...	Ditto	20	
Chandeli ...	Ditto	11	

the Almora district.

the Tarai and Kashipur schools are permanent.

Is are said to migrate to a place when they descend from the to the low country for the winter, and *vice versa* when they ate from a place for the summer months. Temporary schools e hills are open from the 1st of May to the 31st of October, n the Bhabar from the 1st of November to the end of April.

ROADS, 1903.

I.—PROVINCIAL

A.—First class roads, metalled, bridged and drained throughout

(i) Bareilly, Ranibagh and Naini Tal trunk road

B.—Unmetalled roads, bridged and drained throughout

(i) Ranibagh and Ranikhet cart-road

(ii) Karnprayag to Khairna

C.—Unmetalled roads, partially bridged and drained

(i) Ramnagar and Ranikhet cart-road

(ii) Kathgodam, Ramgarh and Almora

(iii) Naini Tal to Ramgarh

(iv) Bhowali to Bhun Tal

(v) Nathua Khan to Mukhtosar

(vi) Ranibagh to Naini Tal bridle-road

II.—LOCAL.

A.—Second class roads, unmetalled, bridged and drained throughout.

(i) Naini Tal to Moradabad

(ii) Ramnagar to Moradabad

(iii) Sultanpur to Bijnor

(iv) Kashipur to Darhial

(v) Kashipur to Thakurdwara

(vi) Jaspur to Rehar

B.—Second class roads, unmetalled, partially bridged and drained.

(i) Naini Tal to Garappa

(ii) Naini Tal to Katighat

(iii) Ramnagar to Khairna

(iv) Khairna to Ghurari

(v) Ramgarh to Dechauri

(vi) Dechauri to Bejari

(vii) Bhun Tal to Moiraula

(viii) Peora to Mukhtosar and Dhari

C.—Fourth class roads, partially bridged and drained

(i) Jaspur to Ramnagar

(ii) Bhun Tal to Malwa Tal

(iii) Batalghat to Dunpo

(iv) Batalghat to Kalakhot

III.—GOVERNMENT ESTATES ROADS.

(i) Kashipur, Sultanpur, Kichha, Sitarganj, Khatina and Melaghat.

(ii) Loop from Kichha to Bara and Sitarganj

(iii) Sitarganj to Chorgallia

(iv) Sultanpur to Chhoi

(v) Submontane road, Barmdeo to Hardwar

(vi) Sitarganj to Kathgodam

(vii) Akhrauli to Horai

(viii) Pibbhit, Khatina and Barmdeo

(ix) Sitarganj to Pilibhit

(x) Haldwani, Pipalparao, Barakhara and Sakenia

(xi) Pipalparao to Chakulwa

(xii) Dechauri, Gintegaon and Musabangar

(xiii) Belparao and Shafakhana

(xiv) Ramnagar to Kotah

(xv) Loop, Ramnagar to Karai

(xvi) Rudarpur to Haldwani

(xvii) Kichha to Darao

(xviii) Sheonathpur, Ampokhra and Ramnagar

(xix) Kishanpur to Dolpokhra

(xx) She-pur to Kotabagh

(xxi) Kotah to Kaladhungi

FERRIES, 1903.

Ferry.	River.	Road	Management.
Kundesra,	Pathri ..	Main Tarai road	District Board
Tanda ...	Kosi ...	Ditto ..	Ditto.
Sultanpur,	Naya ...	Ditto ..	Ditto.
Maheshpur,	Ghuga ...	Ditto ..	Ditto.
Kelakhera,	Dabka ...	Ditto ...	Ditto.
Masit ...	Baur ..	Ditto .	Tarai estate.
Mohanpur,	Bhakra	Ditto ...	Ditto.
Gaoghat .	Dhora ...	Kichha to Sitarganj,	Ditto.
Chinki ...	Badaur .	Kichha-Darao ...	Ditto.
Banjara ...	Deoha ...	Sitarganj-Khatima ..	Ditto.
Chikaghat,	Kailas .	Ditto ..	Ditto.
Matcha ...	Ditto ...	Sitarganj to Khatima (via Bijti).	Ditto.
Jhari .	Bahgul ..	Sitarganj to Maldwani,	Ditto.
Chitauna	Ditto .	Sitarganj to Kichha,	Ditto.
Sitarganj,	Ditto ...	Sitarganj to Kichha (direct).	" Ditto.
Jhankat .	Lohiya .	Sitarganj to Khatima,	Ditto.
Pachpera ..	Ditto ..	Sitarganj to Majhaura,	Ditto.

POST-OFFICES.

Peshkari.	Pargana.	Office.	Class.
Naini Tal ...	Chhakhata ...	Naini Tal ...	Head Office
	Ditto ...	Talli Tal ..	Sub-office
	Ditto ...	Bhim Tal .	Ditto
	Ditto ...	Jeolikote .	Ditto
	Ditto ...	Bhowali ...	Branch Office,
	Dhaniyakot ...	Khairna ...	Ditto
	Ditto ...	Betalghat ...	Ditto
	Kotah ...	Kotah ...	Ditto
	Mahruri ...	Mukhtesar .	Sub-office .
	Kutanli ...	Peora ...	Branch Office,
	Ramgarh ...	Ramgarh ...	Ditto
Haldwani ...	Chhakata Bhabar	Haldwani ...	Sub-office .
	Ditto ...	Kathgodam, .	Ditto .
	Ditto ...	Kaladhungi, .	Branch Office,
	Chaubhainsi-Bhabar.	Chorgallia*...	Ditto
Ramnagar...	Kotah Bhabar,	Ramnagar ..	Sub-office ..
Kichha ...	Rudarpur ...	Kichha ..	Ditto .
	Ditto ...	Rudarpur ...	Branch Office,
	Ditto ...	Darao ...	Ditto
	Gadarpur ...	Gadarpur ...	Ditto
	Bazpur ...	Shafakhana,	Sub-office .
Kilpuri ...	Kilpuri ...	Lalkuat ..	Branch Office,
	Ditto ...	Sitarganj ...	Sub-office .
	Bilhori ...	Khatina ...	Branch Office,
Kashipur ..	Kashipur ...	Kashipur ...	Sub-office .
	Ditto ...	Jaspur ...	Branch Office,

* Open from the 1st of November to the 15th of June

† Open from the 1st of November to the 30th of June

MARKETS.

Pargana or Patti.	Locality.	Day.
Chhakhata Bhabar	Haldwani ...	Tuesday.
Chaubhainsi Bhabar	Chorgallia ...	Friday.
Kotah Bhabar ...	Ramnagar ...	Sunday and Wednesday.
	Kaladhungi ...	Friday.
	Belparao... ..	Thursday.
	Aonlakot ...	Saturday.
	Kichha ...	Monday and Friday.
Rudarpur ...	Rudarpur ...	Sunday and Thursday.
	Barah ...	Sunday and Wednesday.
	Darao ...	Wednesday.
	Chakoti ...	Tuesday.
Gadarpur ...	Barakhara ...	Sunday.
	Sakenia ...	Wednesday.
Bazpur ...	Shafakhana ...	Monday.
	Sultānpur ...	Wednesday.
Kilpuri ...	Sitarganj ...	Sunday and Thursday.
Nanakmata ...	Nanakmata ...	Monday and Friday.
	Haldua ...	Tuesday and Friday.
	Bijti ...	Wednesday and Saturday.
Bilheri ...	Khatima... ..	Tuesday and Friday.
	Majhaura ...	Monday and Thursday.
Kashipur ...	Kashipur ...	Tuesday and Saturday.
	Jaspur ...	Friday.
	Raipur Kotari ...	Saturday.
	Mawakhara ...	Sunday.
	Bhabra ...	Thursday

FAIRS, 1903.

Pargana.	Locality.	Name of fair.	In honour of—	Date.	A
Chhukhata Pahar.	Naini Tal.	Dol or Janamashtami.	Krishna	Bhadon Badi 8 and 9.	
	Ditto	Nanda Ashtami	Nanda Devi,	Bhadon Sudi 8 to 11.	
	Ranibagh	Chitravila	Mahadeo	Magh Amawas	
	Ditto	Ditto	Ditto	Phagun Badi 14.	
Dhyaniiran	Bhim Tal	Bhimeswar	Ditto	Sawan 2nd	
	Kailas	Kailas	Mahadeo and Jwala Devi.	Kartik Badi 14	
Kotah Pahar.	Tirath	Shivratri	Mahadeo	Phagun Badi 14	
	Sitabani	Sitabani	Sita	Magh Amawas,	
	Haldwani	Ramlila	Ram Chandra	Kuar Sudi 1 to 12,	
Chhukhata Bhabar.	Ditto	Janamashtami,	Krishna	Bhadon Badi 8 and 9.	
Kotah Bhabar.	Kaladhungi.	Ramlila	Ram Chandra	Kuar Sudi 1 to 12.	
Cholkia	Ramnagar.	Ditto	Ditto	Ditto	
	Kashipur	Balsundari Devi.	Devi	Chait Sudi 1 to 15.	
	Ditto	Moteswar	Mahadeo	Phagun Badi 14.	
Kashipur,	Ditto	Zahar Aulia	Zahar Aulia Pir.	Bhadon Badi 9	
	Ditto	Gudashi	Burha Babu,	Bhadon Sudi 12	
	Ditto	Daschra	Ram Chandra	Kuar Sudi 1 to 10	
	Tanda Uj-jain.	Zabar Aulia	Zahar Aulia Pir.	Bhadon Badi 9,	
Gadarpur,	Jaspur	Janamashtami.	Krishna	Bhadon Badi 8	
	Gadarpur	Jharhi Mahadeo.	Mahadeo	Phagun Badi 14.	
	Ditto	Sarwar Pir	Sarwar Pir.	Kuar Sudi 9	
Bazpur	Alapur	Ramlila	Ram Chandra	Kuar Sudi 1 to 11.	
	Jharkhandi,	Shivratri	Mahadeo	Phagun Badi 14	
Rudarpur,	Rudarpur	Jharhi Mahadeo.	Ditto	Ditto	
	Ataria	Ataria	Ditto	Chait Purnamashi	
	Kiekhia	Janamashtami.	Krishna	Bhadon Badi 9,	
Kilpuri	Kilpuri	Jharhi Mahadeo.	Mahadeo	Phagun Badi 14.	
	Jharhi	Ditto	Ditto	Ditto	
	Bijti	Balemiyan	Balemiyan	Jeth 1 to 5	
	Sisai	Sisai	Mitthan Shah	Magh 1 to 5	
Nanakmata,	Sitarganj	Ramlila	Ram Chandra	Kuar Sudi 2 to 11.	
	Nanakmata,	Dipabali	Nanak Shah.	Kartik Badi 15	
Bilheri	Melaghat	Ghat fair	Sarda river.	Kartik Purnamashi	
	Chakrapura	Sauratr	M	Phagun Badi 14	

GAZETTEER OF NAINI TAL.

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